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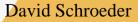
Western Manufacturing

Mission Statement

- We will lead as the premier manufacturer of commercial equipment for dry sifting applications in food processing and custom industrial applications.
- Our company is widely known for its technical expertise and quality products.
- We pride ourselves on responsiveness to customer needs and respect for fellow employees.









Bob Ricklefs



Paul Van Camp



Brooke Dessert



Matt Fanshier



Angie Harralson



Doug Price



Jeff Seeger



Kathy Wiley



Factors integral to our success

- 1. Quality Craftmanship
- 2. Innovation & Creativity
- 3. Responsive, Professional Service
- 4. Communication





- Cereal Processing
- Mix Plants
- Bakeries
- Spice Industry
- Confectionery
- Dried Dairy Products
- Pet Foods
- Plastics
- Chemicals
- Minerals

Industries We Serve



Sifters

Free Swinging Sifters

"HS" Free Swinging Sifter

Metal Free Swinging Sifter

Modular Sifters

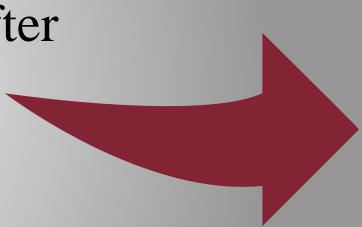
Box Type Sifters

QA Series

Gravity Flow

In-Line







• 3 sieve sizes

• 2, 4, 6, or 8 sections

• 17 to 30 sieves per stack

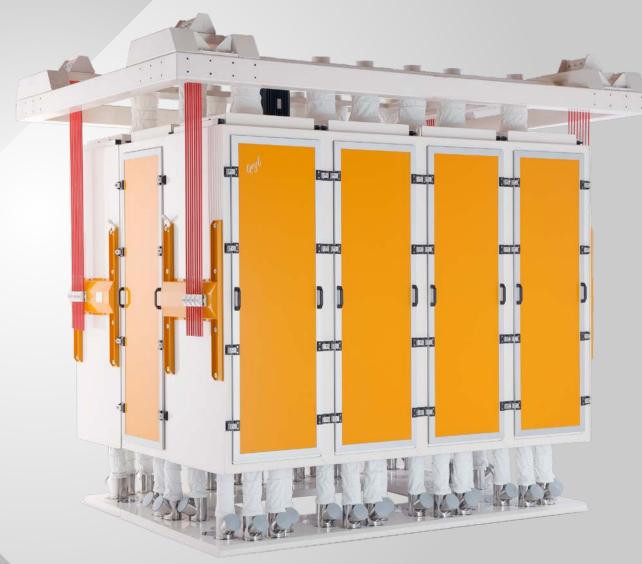
• 80 to 950 ft²



Metal Free Swinging Sifters

- 2 standard sieve sizes • 640 mm, 740mm
- Custom sizes available
- 2 to 12 compartments
- 12 to 30 sieves per stack







Tru-Balance Box Type Sifters



- 4 sieve sizes
- 4 to 14 sieves per stack
- 10 to 120 ft
- Up to 6 separations
 Scalp
 Grade
 Remove fines



Tru-Balance Modular Sifters

• 2 sieve sizes

• 4 to 9 sieves per stack

• Up to 3 separations

Scalp

Grade

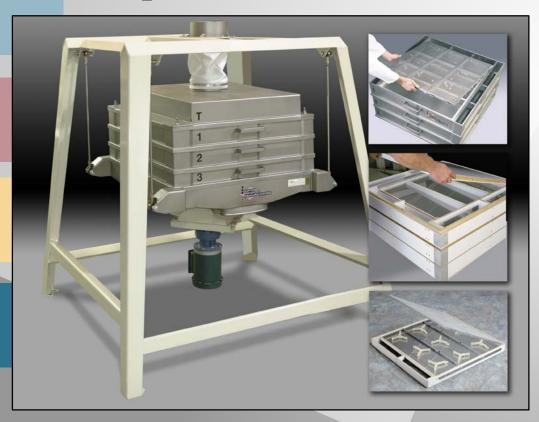
Remove fines





GyroSift

- 4 to 15 ft²
- ½ HP motor
- 290 rpm 2" circle



GyroSift GS36

- 5 to 15 ft²
- 1 HP motor
- 2 to 3 separations
- Molded snap on gaskets



Sampl-Sifter

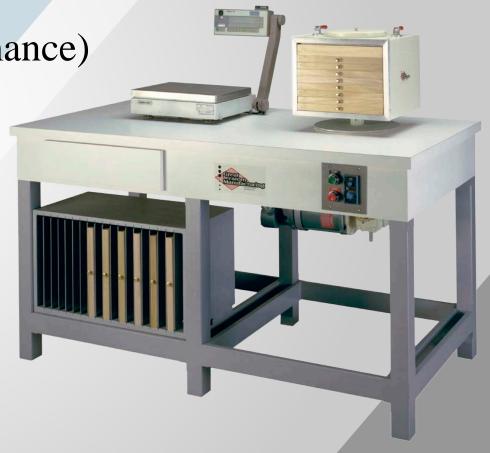
• Table top & Work station types available.

• Great for:

- Break release analysis (grinding performance)

- Sifting performance analysis





QA Series Sifters



Gravity Flow

In-Line

We offer customization of our standard equipment to suit your installation and process requirements.



Gravity Flow Tru-Balance Sifter



- 2 sieve sizes
- 3 to 9 sieves per stack
- Molded snap on gaskets
- Up to 3 separations
 Scalp
 Grade
 Remove fines

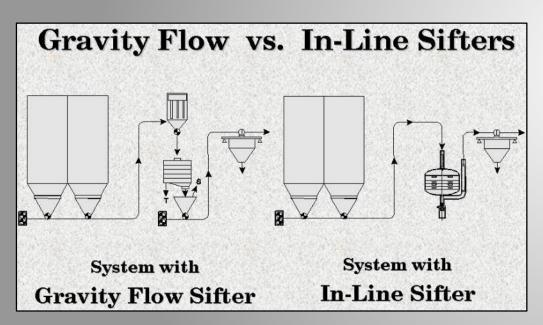


Gravity Flow and In-Line sifters help to monitor plant and process conditions, supplier sanitation, and ensure contaminate free ingredients.

In-Line Tru-Balance Sifter

- 4 sieve sizes
 2 to 7 sieves per stack
- 4 to 62 ft²

2 separations
 Scalp only



In-Line sifters eliminate the need for extra equipment and are made to fit directly into a vacuum or pressure pneumatic conveying line.



QA Series Sifters

- 304SS product contact surfaces
- Screen trays contain all serviceable interior components
- Snap-on gaskets
- Perforated backwire
- Tray design enables sieve frame to be simple and sanitary









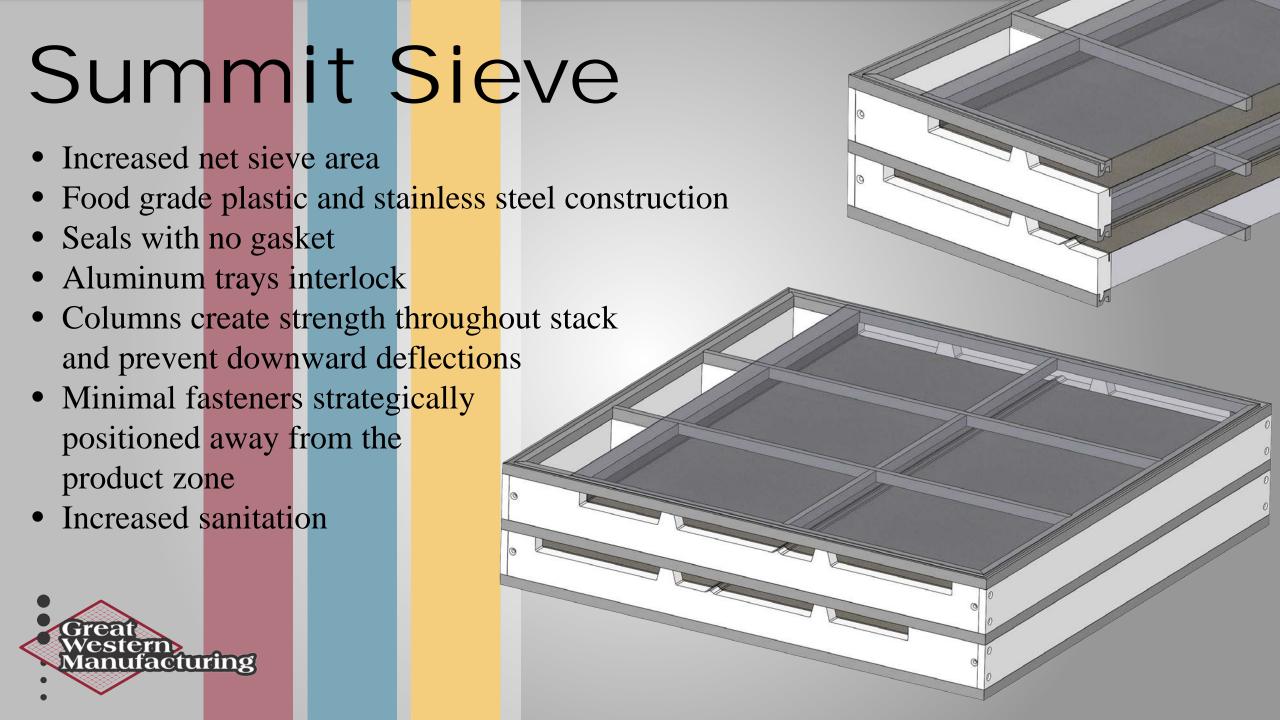
QA Series Sifters

Particle flow in a QA machine



Our newest







- Easy inspection
- Easy flow sensor
- Easy seal
- Easy maintenance

- Easy operation
- Easy to manage
- Easy configurations
- Ease of mind



Tray Re-Screening

As long as your sieves and trays are in reasonable shape, we can rescreen trays quickly and competitively!

Most orders are completed in two weeks.



Maintenance Program

Choose a program to fit your needs!

Preventative maintenance can be the answer to limiting equipment failures and minimizing the risk of downtime.

From courtesy inspections of any visible issues to in-depth frame and sieve inspections, we have a program to help keep your operation running smoothly.



We are still gathering feedback from customers, like you, to create a program to best suit your needs.



Easy, In-house Maintenance Practices

Sifter Maintenance



Keep bolts tight.



Keep sieves tight.



Keep gaskets in good condition.





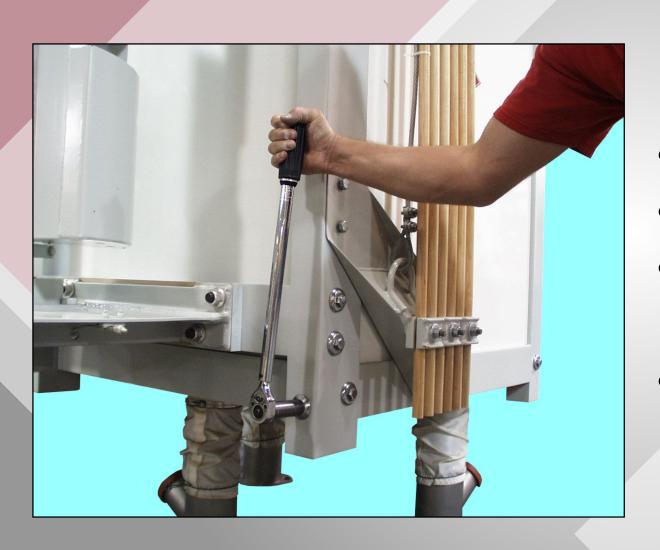
Keep sieves in good condition. Screens (tight), cleaners, backwire, pans and gasket.



Keep the sifter lubricated and belts tight.



Keep bolts tight



• Drive bolts 150 ft-lbs

• Reed clamps 75 ft-lbs

• Box bolts 50 ft-lbs (flush)

or 75 ft-lbs (rec)

Press-tops25 ft-lbs



Re-torque bolts

• New installs- check bolts weekly until all shrinkage is taken-up.

• Tightening a little frequently is better than a lot infrequently.

• Re-check drive bolts especially.

• Re-check after heat sterilization if that is what your plant does rather than fumigate.



Wood reed spacers



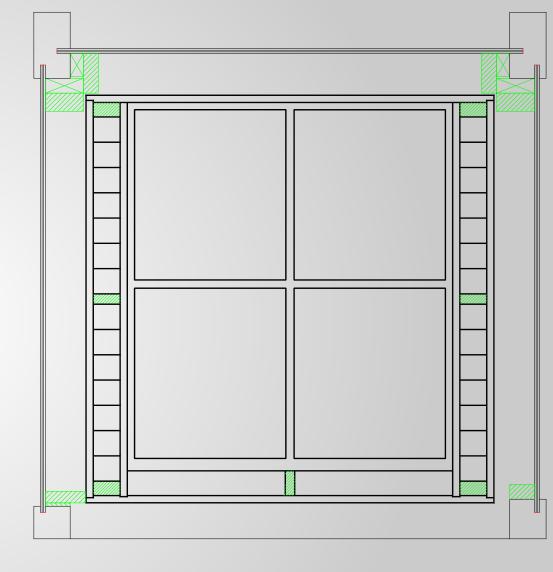
• Reed spacers should be placed approx. 12" above the top of the sifter

• If the reeds are over 14 ft long use two spacers equally spaced 1/3 of the way



Door with Wedge

- Wedge allows space for easy sieve removal.
- Wedge aligns sieves and forces them to the left.
- Door pushes sieves to back.
- Snug door first, then lower press top.
- Snug door rod.







Sifter Hardware

• Hand tighten the tail nuts.

Take care of broken door bolts

• Just snug the door rod.

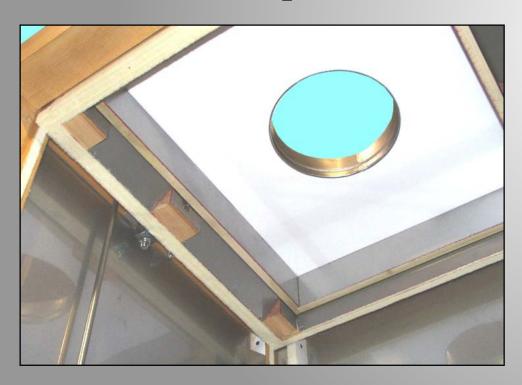
Make sure the door rods are used

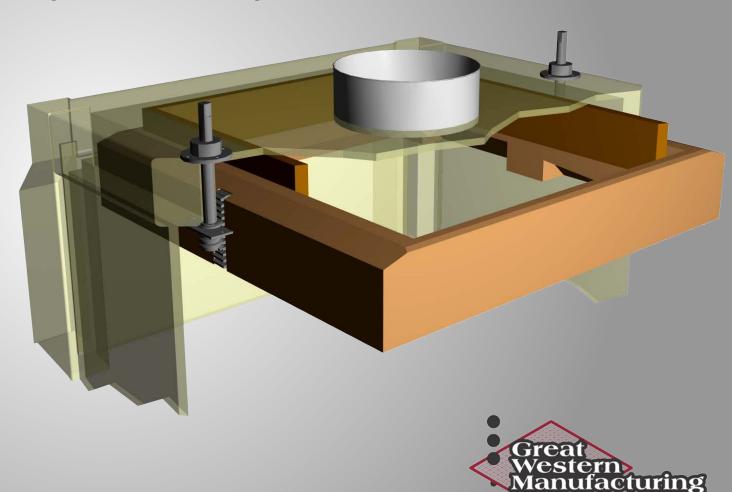




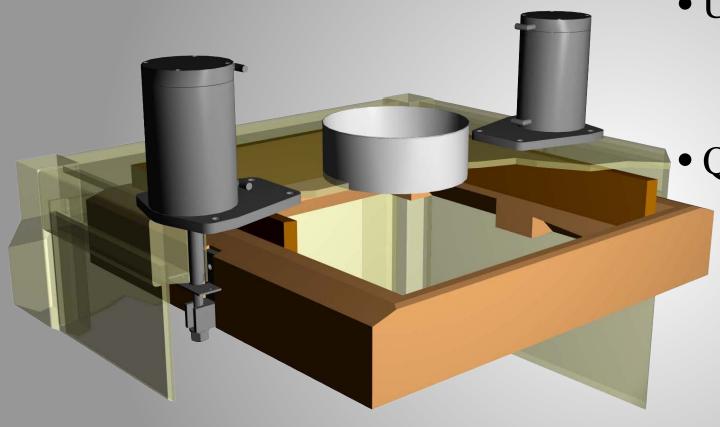
R&P Press Top

- Ensure the R&P operators are in good working condition
- Gasket condition
 - Top to sieve
 - Between top & seal





Pneumatic Compression

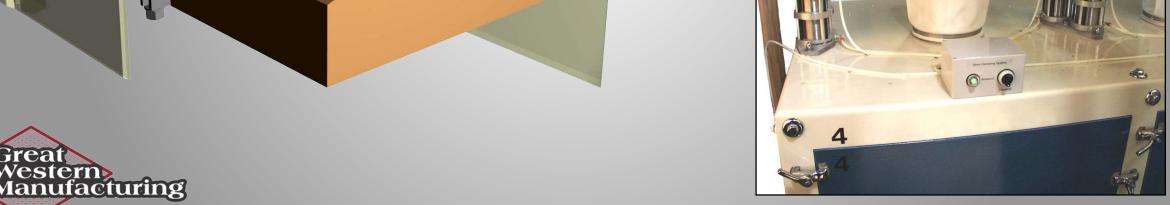


• Uniform, constant compression:

Reduces leakage

• Reduces sieve & gasket wear.

Quicker & easier access





Lubrication & Bearing Maintenance

Keep it closed & clean

• 2 bearings

• 2 spirals & shafts

• 4 weight bucket collars



Grease

• We recommend Mobilux EP 2 grade

Service your sifter every 60 days

 Pressure fill each bearing lube pt until a slight amount of grease purges from the top seals of both the upper and lower bearing





HS bearing top or bottom by flipping seals

• Top seal is installed non-conventionally

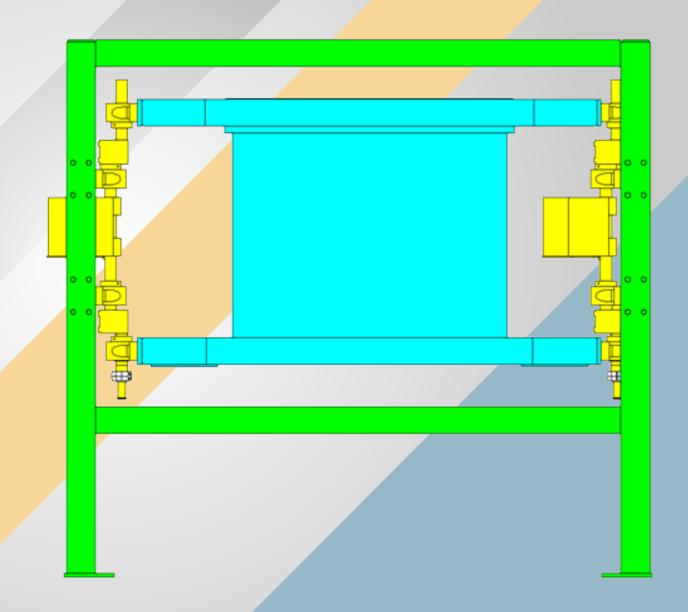
- With the bearings installed the spring on the seals will all be facing up
- HS bearings can be rebuilt if the housing has not been scored



Tru-Balance Drive

- Fixed crankshafts
- Precision machined frame
- Balanced for a given set of conditions

- 8 Pillow block bearings
- 2 Tie bar bearings
- Other areas depending on the machine type.





Tools used by Millers



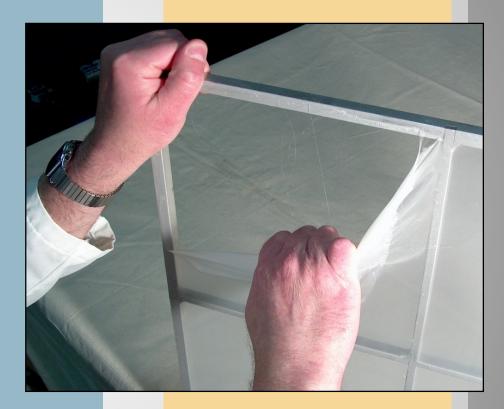




Screen Removal



Push screen off from back of tray vestering



Pull the screen off

Screen Removal

Cut away stubborn screen



Scrape or sand off glue & screen



NOTE:

- Millers are **NOT** removing every speck of glue or screen material present.
- Objective is to get the surface even and ensure the remaining glue build up is not too great.

Gluing Procedure

- Set-up stretcher properly
- Check backwire and liners
- Insert cleaners
- Allow screens to remain under tension for 2-3 min
- Use a minimum of adhesive
- Spread adhesive evenly with proper width of squeegee





Hand Stretching Procedure

- Remove old screens
- Remove any remaining staples
- Check backwire
- Check liners
- Insert cleaners
- Set staples 1" apart at a slight angle.



Sifter Maintenance Records

Track changes

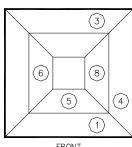
• Screen sizes

• Repairs required next downtime



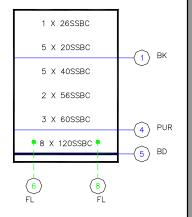
NΟ	HAND	DEPTH	CLOTH	CLOTH SIZE
1	N	4 1/4	26SSBC	20 5/8" X 23 11/16"
2	N	4	20SSBC	,,
3	N	,,	,	**
4	N	,,	,	**
5	N	,	,,	"
6	CBCB	2 5/8	,	**
7	AADA	3 1/2	40SSBC	22 1/8" X 19 1/2"
8	N	3	,	**
9	N	,	,	**
10	N	,,	,	**
11	N	2 5/8	,	**
12	N	2 1/4	56SSBC	
13	N	,	,,	"
14	N	,	60SSBC	"
15	N	,	,,	"
16	cccc	,	,,	"
17	N	,	120SSBC	,,
18	N	,	,,	"
19	N	,	,,	#
20	N	,	,	#
21	N	,	,	#
22	N	,	,,	#
23	N	,	*	**
24	N	1 13/16	,,	**

TOP	4 1/4	'BBAB' CHAMFER
воттом	4 1/2	



FRONT BOTTOM PLAN

FLOW DATA SHEET				
SIFTER SIZE	6x30- 24-11/16			
SHOP NO. 2000	SECTION NO1_			
STOCK BRK				



INSPECTED BY DATE

WORK RECORD



Troubleshooting





Process Troubleshooting

Is this a sifter problem?

- Sifter Backing Up
- Sifter Tailing Over
- Inaccurate Separations

Often, these are not sifter issues, but due to other factors such as...

- Inadequate spouting size or slope
- Air problems
- Grinding equipment
- Variable load conditions

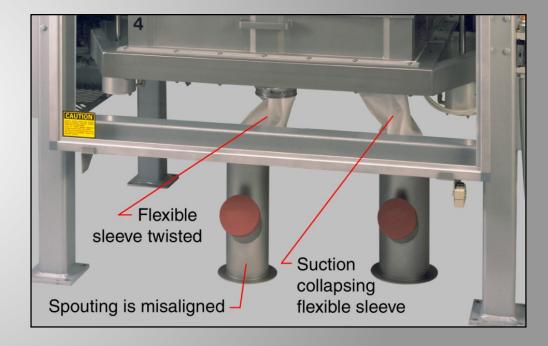


Process Troubleshooting

Sifter Backing Up

- Inlet restricted
- Speed or throw off
 - Increase throw
- Spouting
 - Too flat or too small
 - Misaligned
 - Socks twisted or collapsed

- Sieves
 - Installed wrong
 - Too shallow
 - Throats too small
- Tailings can full





Process Troubleshooting

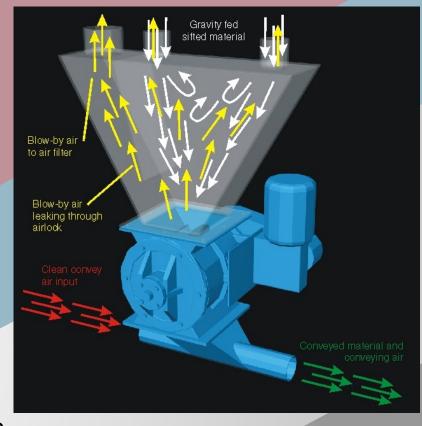
Sifter Tailing Over

- Speed or throw off
 - Increase speed
- Pneumatic backpressure
- Spouting
 - Outlets blocked
 - Too flat or too small
 - Misaligned
 - Flexible sleeves twisted or collapsed



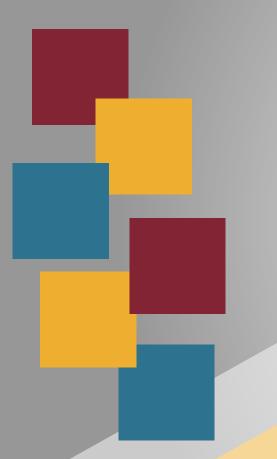


- Screens too loose
- Cleaner problems
- Too shallow (tailout)
- Not enough area
- Pans too flat (no cleaners)





Process Troubleshooting

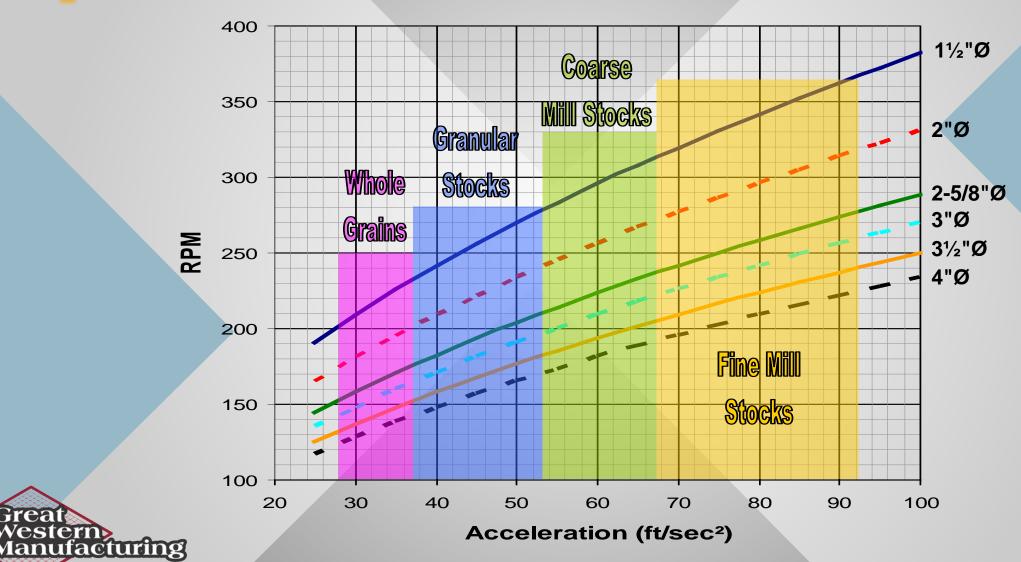


Inaccurate Separations

- Press top leaking
- Sieves leaking
- Sieves installed incorrectly
- Broken or damaged screen
- Screens blinded
- Not enough area
- Improper mesh selection



Speed & Throw Relationship





Many sifting problems are a result of changes in the Speed / Throw relationship.

If we speed up the sifter, will the circle change?

Throw is determined only by the weight of the sifter versus the counterweight. The speed does not affect the sifter's circle.

Excessive weight in the machine will reduce the sifter's circle.

This can result in:

- motor kicking out
- sifter backing up (overloading)



Speed/Throw relationship continued...

- The sifter is backing up.
- Loose or leaking sieves can fill dead channels which will cause the sifter's throw to be reduced.
- The motor kicks out, is a bearing bad?
 - A bearing will growl, smell hot, and eventually lock up.
 Generally the motor will not kick out.
 - If the sifter's circle is reduced, it is a less effective conveyor.
 This can cause the motor to kick-out.
 - If the sieves are too shallow to allow the load to flow properly, this can overload the motor.

The sifter pulls the sleeves loose when it starts.

- Sleeves that are too short or too tight will hold back the sifter throw on start up.
- Make sure the weight bucket mechanism is not in a full or partially open position.

The weight bucket is hitting the back of the sifter box.

- Check for excessive spiral wear, shrinkage of the drive rails, loose drive bolts or damaged weight bucket.
- Requires a new counterweight assembly or shorter throw blocks
- Not a result of a bad bearing.

The sifter fell down.

- Usually happens to new machines because the ceiling clamps weren't tightened.
- Keep wood shrinkage in mind in plants with heat sterilization.

We broke one of the joint bolts & can't find the nut.

- Nuts are hidden in a plugged hole
- Torque joint bolts/reed caps to 75 ft-lbs
- Torque joint bolts only to 50 ft-lbs for flush style boxes
- Torque drive bolts (3/4") 150 ft-lbs



We can't keep the sieves tight.

- Slippage of the sieve press results from excessive clearance between the worm gear and the rack.
- Worn parts should be replaced but may also require shimming.
- Investigate pneumatic sieve compression.



Tru-Balance Sifter Problems

Typical perceived problems are:

- The sifter is out of balance.
- The sifter has a bad bearing.
- The crankshaft is bent.

These are seldom the problems!

Most problems are related to the drive frame.

Frame machined to ± 0.001".



Tru-Balance Sifter Problems

Before re-balancing or replacing bearings, or crankshaft check:

- The machine has been backed up and run full. This can:
 - Spring or break the frame bearing support arms
 - Shear off the weight bucket key
- The floor mounting is uneven, pulling the frame out of shape.
- Broken components have been re-welded.
- Carriers have loosened from the box.



Tru-Balance Sifter Problems

Before re-balancing or replacing bearings, or crankshaft check:

- External braces have been welded to the frame.
- Are counterweight discs in the right place?
- The tie bar system...it may be faulty.
- The sieves are leaking or the press top is loose...filling sifter channels.
- Original sieves aren't in the sifter.
- Original motor isn't on the sifter.



What will help you in the future?

What challenges are you facing?

Equipment improvements?

Plant visits?

Training?



