

THE CLIPPER SUPER X PRECISION SEED CLEANER SERIES

This exceptional series is offered in the following models:

- 4 Screens — X 297 D • X 29 D • X 298 D
- 6 Screens — X 2969 D • X 2968 D

It has now been expanded to include two new Clipper Super X Cleaners:

- 4 Screens — X 2958 D • X 5868 D

fully illustrated and described on separate pages.

The Clipper Super X Series also includes the 7 screen models . . . X 368 D and X 369 D . . . featured on another page.

SUPERIOR FEATURES OF THE SUPER X LINE

SCREEN PERFORMANCE

Variable Pitch Screens are standard equipment on all Clipper Super X Cleaners, permitting exact screen pitch for proper travel of every type of commodity . . . grasses to seed beans and corn.

Variable Shoe Shake controls the action of the seed as it travels the length of the screens . . . permitting the operator to select the speed which provides the most efficient screening.

The bottom screen in each shoe is offset-positioned to allow full travel of seed on the screens.

Automatic Traveling Brushes cross back and forth under each screen, keeping the screen perforations free of clogging. These nylon brushes are adjustable to compensate for bristle wear. The brush mechanism is activated by the No. 80-77 double roller chain brush drive, assuring trouble-free operation.

AIR PERFORMANCE

One top fan makes the first air separation of lightweight trash as seed falls from the hopper to the top screen in the upper shoe. The bottom blast fan applies smooth cur-

SPECIFICATIONS

Model	X297D	X29D	X298D	X2969D	X2968D
Screen Size	34"x42"	42"x60"	54"x60"	42"x60"	54"x60"
No. of Screens in Cleaner	4	4	4	6	6
No. of Screens Furnished	12	12	12	12	12
Extreme Height	90"	98-1/2"	98-1/2"	115"	115"
Extreme Length	130-1/2"	152-1/2"	152-1/2"	152-1/2"	152-1/2"
Extreme Width	65"	76"	88"	76"	88"
Length on Floor	125"	142-1/2"	142-1/2"	142-1/2"	142-1/2"
Width on Floor	48"	56"	68"	56"	68"
Width Between Sills	38"	46"	58"	46"	58"
Height Where Seed Enters	90"	98-1/2"	98-1/2"	115"	115"
Height to Drive Shaft	73"	72-3/4"	72-3/4"	89-1/2"	89-1/2"
Shipping Weight (lbs.)	3100	3800	4300	4700	5000
Drive Shaft Dia.	1-11/15"	1-15/16"	1-15/16"	1-15/16"	1-15/16"

Width specifications listed above do not include dimensions for the modular V-belt guards.

rents of air as the cleaned seed discharges from the cleaner to make the final, accurate air separation. The second top fan, synchronized with the bottom blast fan, carries lightweight foreign material and dust to the dust collecting system. Drive speeds for the top suction fan are selected to run at low to high speeds depending on the weight of the seed.

The Variable Air Regulator makes fast, accurate bottom blast fan adjustments to supply exactly the right amount of air for each separation.

Fan discharge angle is fixed at 45° to the rear as standard construction.

HI-STATIC FANS

Hi-static fans are standard equipment on all Clipper Super X Cleaners with the exception of the Super X 297 D. Higher R.P.M. fan speeds and larger motors are an option to enable these cleaners to be used with a dust filter system.

The static pressure generated by a standard dust collector system ranges between 1-1/2 and 2 inches. A dust filter system creates a static pressure ranging from 5 to 5-1/2 inches. Top fan speeds are increased to 1350 R.P.M. to operate against the increased resistance when filtering dust through a fabric filter system before air is released into the atmosphere.

Hi-static fans are ruggedly constructed of cast steel with the hub and arms in one piece. The fans will not disintegrate at the higher speeds required.

V-BELT GUARDS

Modular guards are included as standard equipment to meet more stringent requirements for operator protection. They are built in sections of expanded metal . . . construction enables easy access for making adjustments to the cleaner and commodity sampling.

HOPPERS

The customer has a choice of a variety of hoppers depending on the commodities to be cleaned. The Chek-Flo Metering Hopper is especially designed to handle any and all commodities, and is used with a variable hopper drive at additional cost.

OPTIONAL EQUIPMENT

Two rubber covered rolls — located between the upper and lower shoes — can be factory installed. These rolls break up clay lumps in beans, reducing them in size so they can be sifted out.

Screen knockers — mounted above the top screens in each shoe — are available and can be supplied upon request.

COMMODITY FLOW using a 4 screen Super X Seed Cleaner . . .

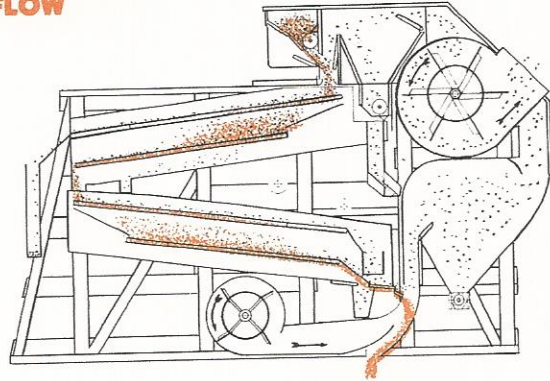
The seed is evenly fed through the hopper in a uniform layer across the full width of the top screen. As the seed falls from the hopper it passes through an air leg connected to one of the top suction fans to remove dust and light foreign material.

In the upper shoe, the good seed drops through the top screen which scalps off large foreign material. The seed passes over the second screen which sifts out small trash and weed seeds.

In the lower shoe, the scalping and sifting action is repeated using screens of a different size or shape to get out contaminants the upper shoe screens could not remove.

After all screening, the seed is routed through the vertical air column of the bottom blast fan for a final, accurate air separation by weight. One top fan, synchronized with the bottom blast fan, carries the lightweight trash and dust to the dust house, collector or dust filter system. The cleaned seed discharges from the cleaner through a

COMMODITY FLOW



slotted opening which extends across the full width at the bottom of the cleaner.

The screens can be quickly set up as three tops and one bottom screen by re-arranging the screens and adding another front catch-all spout which is furnished.

APPROXIMATE CAPACITIES

Bu. per Hr.	X297D	X29D	X298D	X2969D	X2968D
Seeds	35-65	65-90	85-110	65-90	85-110
Seed Grain	60-110	110-165	150-225	110-165	150-225
Beans	85-165	225-325	275-450	225-325	275-450

All capacities will vary according to area and amount of foreign material in the commodity to be cleaned.

Drive Shaft Speeds	Horsepower Required				
	X297D	X29D	X298D	X2969D	X2968D
600 R.P.M. — for cleaning grasses and lightweight seeds	5	7½	10	7½	10
900 R.P.M. — for cleaning grains and small legume seeds	5	7½	10	7½	10
1100 R.P.M. — for cleaning heavy commodities such as beans and corn	5	10	15	10	15
1350 R.P.M. — used when a dust filter system is used with the cleaner	—	15	20	15	20



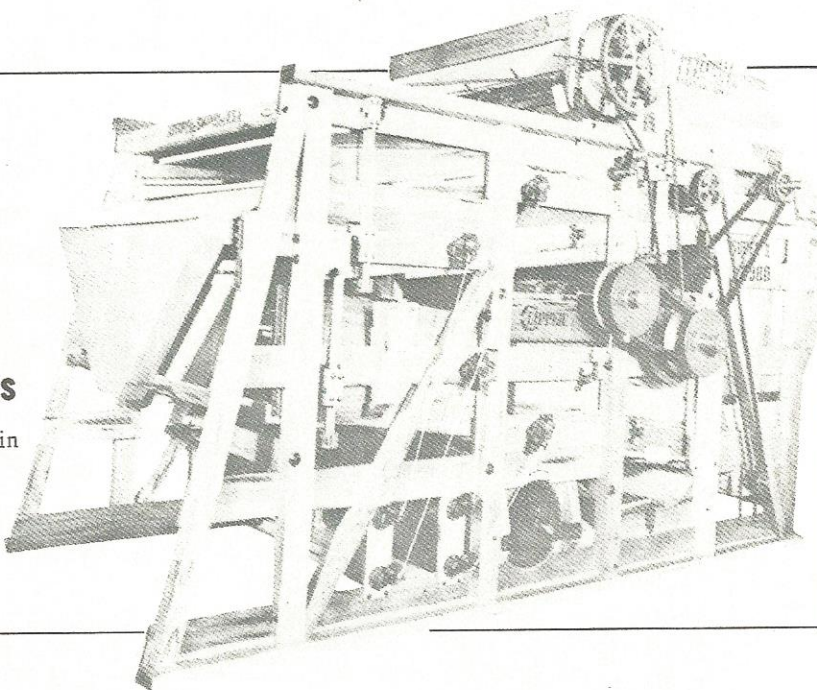
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The CLIPPER *Super X* Series

Ultra Precision Seed Cleaners

This extraordinary concept is supplied in the following models:

- 4 screen X297-D, X29-D, and X298-D
- 6 screen X2969-D and X2968-D



Clipper Super X Precision Seed Cleaners have records of proven performance around the world with features not found in competitive seed cleaners.

FEATURES OF THE SUPER X LINE

AIR PERFORMANCE

Bottom Blast Fan provides a powerful final air separation before cleaned seed discharges from the cleaner. All remaining dust and lightweight seeds are separated and discharged from the back settling chamber. This precision quality air insures a separation of light foreign material not possible with ordinary seed cleaner air systems.

The velocity can be quickly trimmed from the slowest to the fastest degree for precision selectivity...offering a wide range of air adjustments with complete air control.

Top Suction Fans quickly remove lightweight trash. The first air separation is performed as seed leaves the hopper. The second top fan...synchronized with the Bottom Blast Fan...blows air to the dust house or cyclone collector.

Variable Air Regulator makes fast, accurate Bottom Blast Fan adjustments to supply exactly the right amount of air for a particular separation.

SCREEN PERFORMANCE

Variable Pitch Screens are standard equipment on Clipper Super X Seed Cleaners. This feature is necessary because of the multiplicity of seed sizes and shapes, permitting the exact pitch adjustment for proper travel of every type of seed.

Variable Shoe Shake controls the action of the seed as it travels down the screens. This feature allows a wide range adjustment of screen movement...the operator can select the correct speed for best cleaning results.

The bottom screen in each shoe is offset-positioned to allow full travel of seed.

Automatic Traveling Brushes set under each screen keep perforations open, assuring peak screen efficiency. The brush mechanism is activated by the dependable No. 80 Roller Chain Brush Drive.

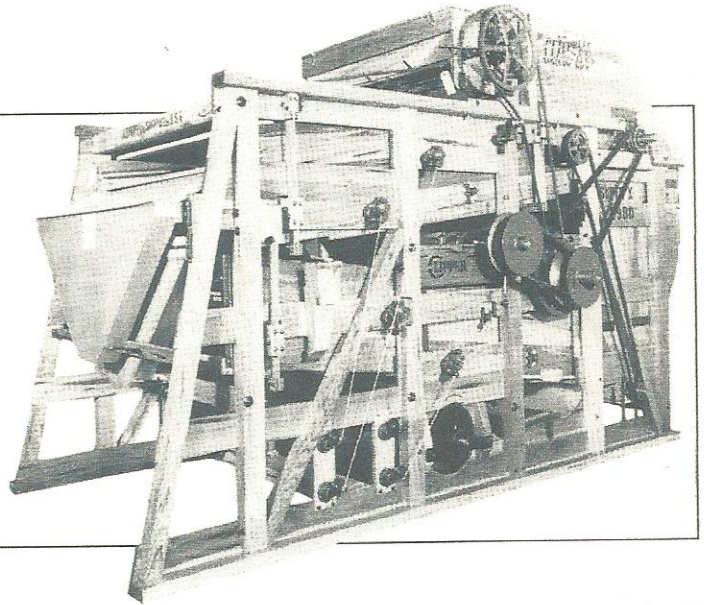
The CLIPPER *Super X*

29-D Series

Ultra Precision Seed Cleaners

This extraordinary new concept is supplied in the following models:

- 4 screen X29-D, X297-D and X298-D
- 6 screen X2969-D and X2968-D



This "years ahead" design offers the Seed Trade a vital major improvement that could only have been made by A. T. Ferrell and Company; namely, a more efficient precision seed cleaner than the world famous Clipper Super 29-D, which until the advent of this X machine has never been equalled by any other make or model.

The Super X 29-D is not new to our engineers — in fact, the machine is a result of several years of research and tests. For final proof, split runs were made over the pilot models and Super 29-D's for accurate comparative performance.

ACHIEVEMENTS OF THE SUPER X LINE

AIR IMPROVEMENTS

- .. The Clipper Bottom Blast Fan fully illustrated and functionally described on page 2, **an A. T. Ferrell & Company first**, recognized for many years as the ultimate in final air separation principle **HAS BEEN VASTLY IMPROVED.**

This newly redesigned feature incorporates a funnel shaped inlet which receives its maximum volume with absolutely no restrictions to impede the free flow of air. The entire Bottom Blast air passage has been scientifically shaped to further improve the "free flow" factor. The settling chamber is now greater in size, increasing former efficiency permitting extra profits because of its ability to select the salvageable seed from foreign materials, thus holding seed loss to a minimum. It is equipped with an auger which reports the trash to the side of the cleaner for convenient disposition.

Its applied velocity can be quickly trimmed to the most discriminating degree for ultra selectivity.

- .. Much wider range of air adjustments.
- .. Complete air control including a new type booster valve

which allows precise dampening yet maintains minimum velocity through exhaust ducting required to keep pipes to dust collector from plugging.

- .. Increased selectivity of air for positive air separations.
- .. Even air distribution throughout the Super X never before attained by any other make or model.

SCREEN SYSTEM

- .. Bottom screen in each shoe offset-positioned to allow full travel of seed.
- .. Larger diameter (1 3/16") Brush Carrier rod giving better support and positive brush contact.
- .. New style brush adjusting mechanism — **positive action — no clogging**, grain cannot lodge and jam mechanism.

CONSTRUCTION

- .. Reinforced rigid frame supports incorporated for greater cleaner stability.
- .. Settling chamber auger routes trash to side of cleaner for convenient spouting.
- .. A clean-out door is installed on top of the air chamber in back of the bottom fan housing, making it easier to clean out the fan drum and prevent seed mixtures.

Well Known Regular Clipper Features Include:

1. Two large Top Suction Fans which quickly remove light weight trash.
2. Variable Shoe Shake for the desired shoe vibrations per minute — completely, quickly adjustable over a wide range of speeds — adjusted to the proper shake for each commodity.
3. Adjustable-Pitch Screens — permit exact pitch adjustment for the proper travel of every type of seed.
4. Variable Air Regulator — The precision designed assembly which makes fast, accurate Bottom Blast Fan adjustment to supply exactly the right amount of air for the particular job.
5. Continuous-Travelling Screen Brushes — double set under each screen to keep perforations clean assuring peak screen efficiency. Powered by the dependable GS-53 Brush Drive. The No. 80 Double Roller Chain Brush Drive supplied on Super X 2969-D and 2968-D models.

SUPER X COMMODITY FLOW

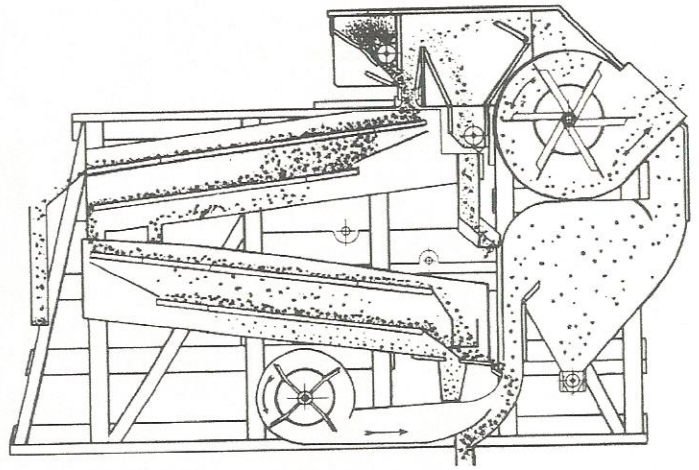
The seed is evenly fed through the hopper in a uniform layer across the full width of the top screen. As the seed falls from the hopper it passes through an air leg connected to a top suction fan to remove dust and light foreign material.

In the upper shoe, the good seed drops through the top screen which scalps off large trash and weeds. The seed passes over the second screen which sifts out small trash and weeds.

In the lower shoe, final scalping and sifting is performed with the top screen removing foreign material larger than the good seed while the bottom screen sifts out smaller foreign material.

After all screening, the seed enters the vertical air column of the Bottom Blast Fan for a final, accurate air separation by weight. The top fan, synchronized with the bottom fan, carries the lightweight trash and dust to the dust house or cyclone collector. The cleaned seed discharges across the full width of the cleaner from a 4-inch wide opening under the cleaner.

The screens can be quickly set up as three tops and one finishing screen by re-arranging special catch-all spouts furnished.



Unless otherwise specified, the Super X is supplied with a Roll Feed Hopper. Several other hoppers are available and described on the features page.

Extras Available at Additional Cost:

The newly engineered Chek-Flo Metering Hopper, especially designed to handle the most trashy grasses, is available used with the variable hopper drive.

Screen knockers available for top screens can be supplied upon request.

Sturdy Guards are Available for any or all Drives

Two rubber rolls for crushing clay lumps in beans or one steel and one rubber roll for crushing wild onions can be factory installed if desired.

The fan discharge angle is fixed at 45° to the rear as shown.

1. To run ducting vertically use one 45° elbow segment.
2. To run ducting at 45° angle toward front use two 45° elbow segments.

Drive Shaft Speeds

600 r.p.m. — for cleaning only grasses and light weight seeds.

900 r.p.m. — for cleaning grains and small legume seed.

1100 r.p.m. — for cleaning heavy commodities such as beans and corn.

SPECIFICATIONS — CAPACITIES

	X 297-D	X 29-D	X 298-D	X 2969-D	X 2968-D
Model Number	X 297-D	X 29-D	X 298-D	X 2969-D	X 2968-D
Screen Size (inches)	34 x 42	42 x 60	54 x 60	42 x 60	54 x 60
Bu. per Hr. — Seeds	35-65	65-90	85-110	65-90	85-110
Bu. per Hr. — Seed Grain	60-110	110-165	150-225	110-165	150-225
Bu. per Hr. — Beans	85-165	225-325	275-450	225-325	275-450
No. of Screens in Cleaner	4	4	4	6	6
No. of Screens Furnished	12	12	12	12	12
Extreme Height (inches)	90	98½	98½	115	115
Extreme Length (inches)	130½	152½	152½	152½	152½
Extreme Width (inches)	65	76	88	76	88
Length on Floor (inches)	125	142½	142½	142½	142½
Width on Floor (inches)	48	56	68	56	68
Width Between Sills (inches)	38	46	58	46	58
Height to Where Grain Enters (inches)	90	98½	98½	115	115
Height to Drive Shaft (inches)	73	72¾	72¾	89½	89½
Horsepower Required — 600 r.p.m.	5	7½	10	7½	10
Horsepower Required — 900 r.p.m.	5	7½	10	7½	10
Horsepower Required — 1100 r.p.m.	5	10	15	10	15
Shipping Weight (lbs.)	3100	3800	4300	4700	5000

Drive shaft diameter of X 297-D — 1 11/16 in. — other models listed — 1 15/16 in.

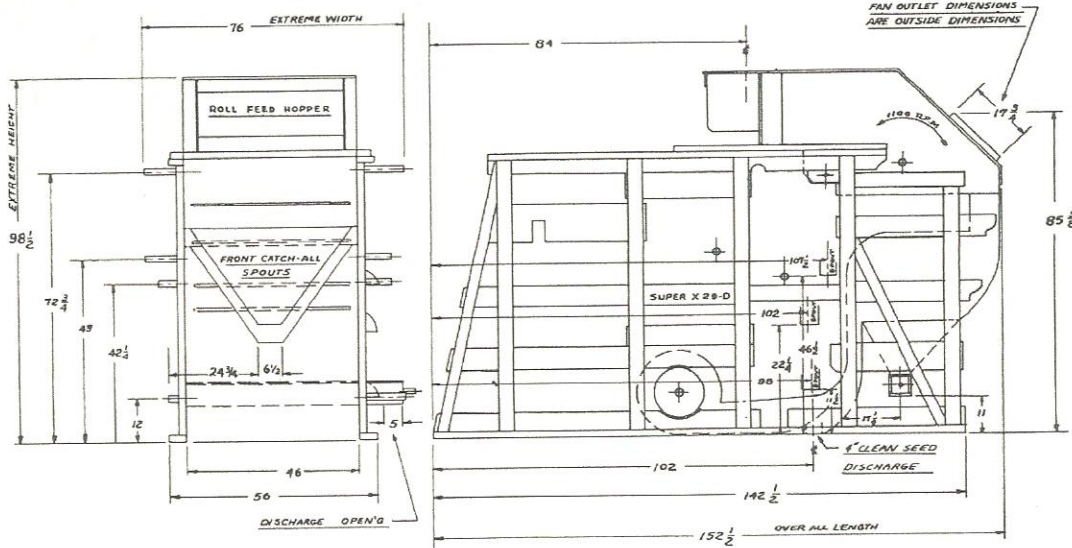
The Super X 29-D

Example of Cleaning using the 4 screen Super X-29D

The hopper (special purpose hoppers available) feeds the seed steadily through the hopper top suction air leg and evenly distributes it across the 42" width of the top screen. The suction removes light trash while sticks, stems, leaves, etc. are scalped off by the screen.

The good seed drops through the first screen onto the second screen which is selected to hold up the good seed and drop everything smaller. The contents of the screen is routed to the top screen of the lower shoe which usually will be selected of a size to do a second (closer) scalping job. The good seed falls through to a

final or finishing screen which drops everything smaller than the stock and finally delivers the crop seed to final discharge through the Bottom Blast Fan column of air. This air separation adjustment is fortified and maintained by both the Bottom Blast Fan and one of the two top suction fans. The velocity adjustment is extremely sensitive and capable of making precise air separations of the cleaned seed by weight. The cleaned seed discharges across the full width of the cleaner from a 4 inch wide opening under the cleaner. Any remaining dust is blown to the collector dust house while the heavier foreign material is lifted into two settling chambers.



As is true with the Super 29-D the screens can be quickly set up as three tops and one finishing screen by re-arranging special catch-all spouts furnished.

Unless otherwise specified, the Super X is supplied with a Roll Feed Hopper. Several other hoppers are available as shown and described on page 4.

Extras Available at Additional Cost:

The newly engineered **metering hopper**, especially designed to handle the most trashy grasses, is now available used with the variable hopper drive.

Screen knockers available for top screens can be supplied upon request.

For seedsmen who are interested in running grasses and small light weight seeds **only** a special set of drive sheaves and belts are available. Speed can be cut to as low as 550 r.p.m. By owning two sets of sheaves and belts this machine will clean either small or large seeds — the transition from one pulley-belt combination takes but a couple of minutes.

Sturdy Guards are Available for any or all Drives

Two rubber rolls for crushing clay lumps in beans or one steel and one rubber roll for crushing wild onions can be factory installed if desired.

The fan discharge angle is fixed at 45° to the rear as shown.

1. To run ducting vertically use one 45° elbow segment.
2. To run ducting at 45° angle toward front use two 45° elbow segments.

SPECIFICATIONS - CAPACITIES

Model Number	Super X 297-D	Super X 29-D	X 298-D	X 2969-D	X 2968-D
Screen Size (inches)	34x42	42x60	54x60	42x60	54x60
Bu. per Hr.—Seeds	35-65	65-90	85-110	65-90	85-110
Bu. per Hr.—Seed Grain	60-110	110-165	150-225	110-165	150-225
Bu. per Hr.—Beans	85-165	225-325	275-450	225-325	275-450
No. of Screens in Cleaner	4	4	4	6	6
No. of Screens Furnished	12	12	12	12	12
Extreme Height (inches)	90	98½	98½	115	115
Extreme Length (inches)	130½	152½	152½	152½	152½
Extreme Width (inches)	65	76	88	76	88
Length on Floor (inches)	125	142½	142½	142½	142½
Width on Floor (inches)	48	56	68	56	68
Width Between Sills (inches)	38	46	58	46	58
Height to Where Grain Enters (inches)	90	98½	98½	115	115
Height to Drive Shaft (inches)	73	72¾	72¾	89½	89½
Drive Shaft Speed (r.p.m.)	1100	1100	1100	1100	1100
Horsepower Required	5	7½	10	7½	10
Shipping Weight (lbs.)	3100	3800	4300	4700	5000

Drive shaft diameter of X297-D—1 11/16 in. — other models listed—1 15/16 in.