

Wholesale - 2009

H & T Sheet Metal Mfg.



S P I R A L S

H & T SHEET METAL MFG.
18427 AR HWY 13-S
HUMNOKE, ARKANSAS 72072
USA

PHONE: (501) 275 - 3758
24 hr FAX: (208) 361-3951
8 am - 5 pm FAX (501) 275-3758
E-mail : htmfg@centurytel.net
Web Address : <http://www.spiralseparators.com>
Web Address : <http://www.ar-net.com/ht>

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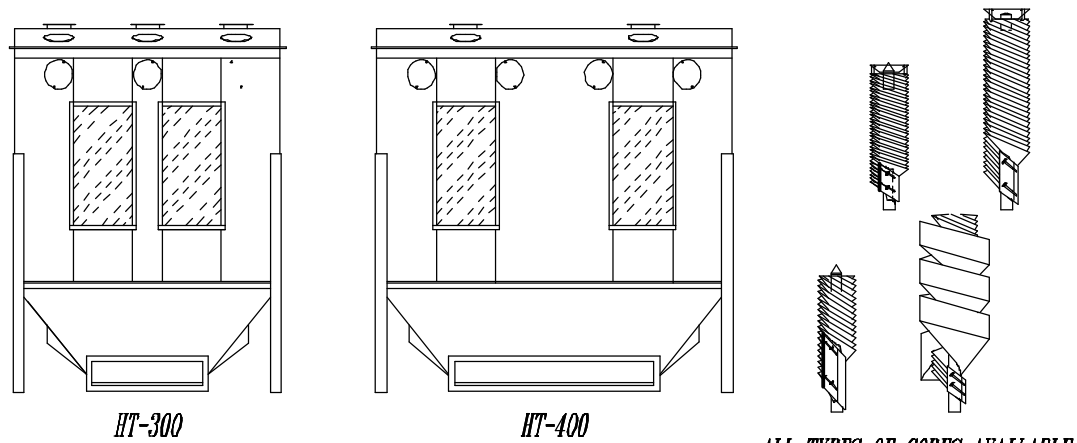
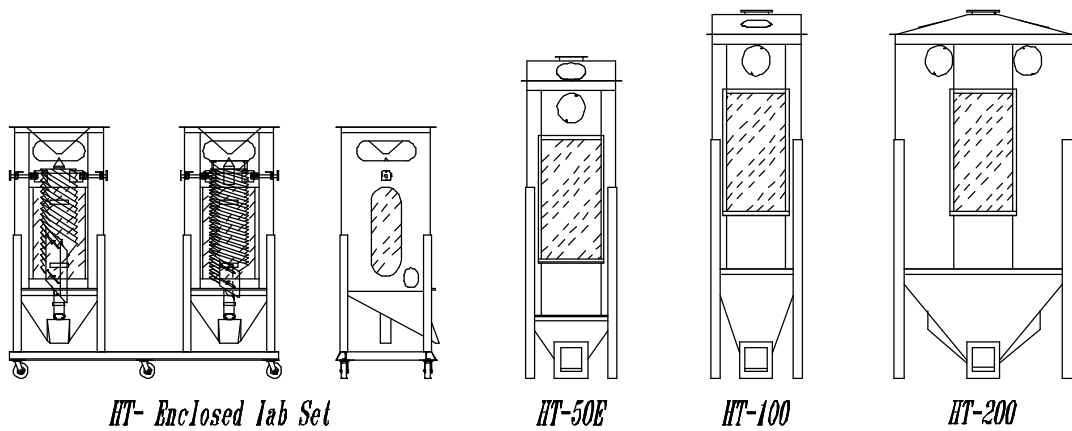
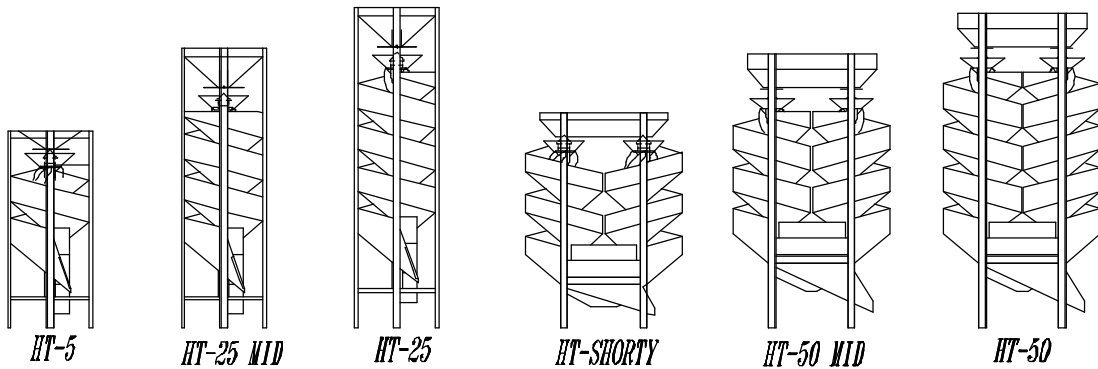
PHONE: (501) 275 - 3758
24 hr FAX: (603) 687-9150
8 am - 5 pm FAX (501) 275-3758
E-mail : h&tmfg@centurytel.net
Web Address : <http://www.spiralseparators.com>
Web Address : <http://www.ar-net.com/ht>

INDEX OF PRODUCTS

Spiral Seed Cleaners and Accessories

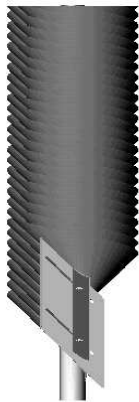
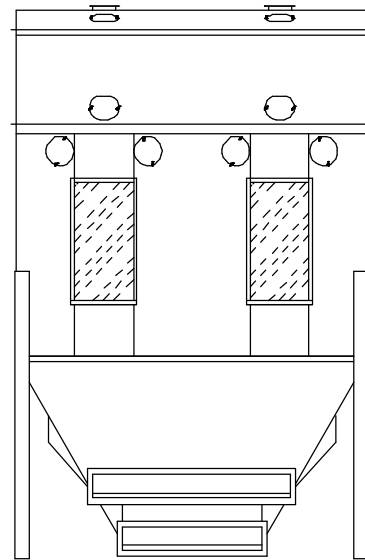
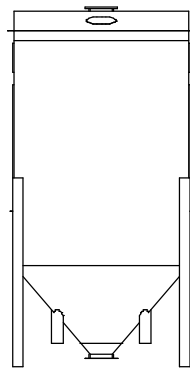
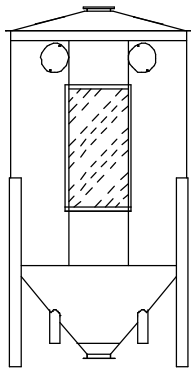
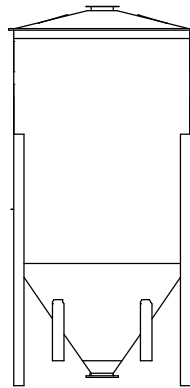
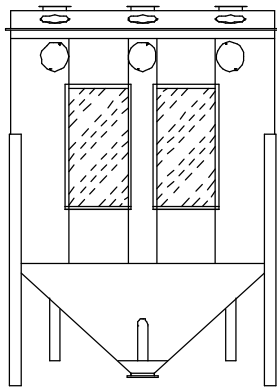
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Some of ... H & T "S P I R A L" GRAVITY CLEANERS



And some more H & T Products

*H & T SHEET METAL MFG
18427 AR Hwy 13 S
HUMNOKE, ARKANSAS
ZIP - 72072
Phone: 1-501-275-3758*



Galvanized

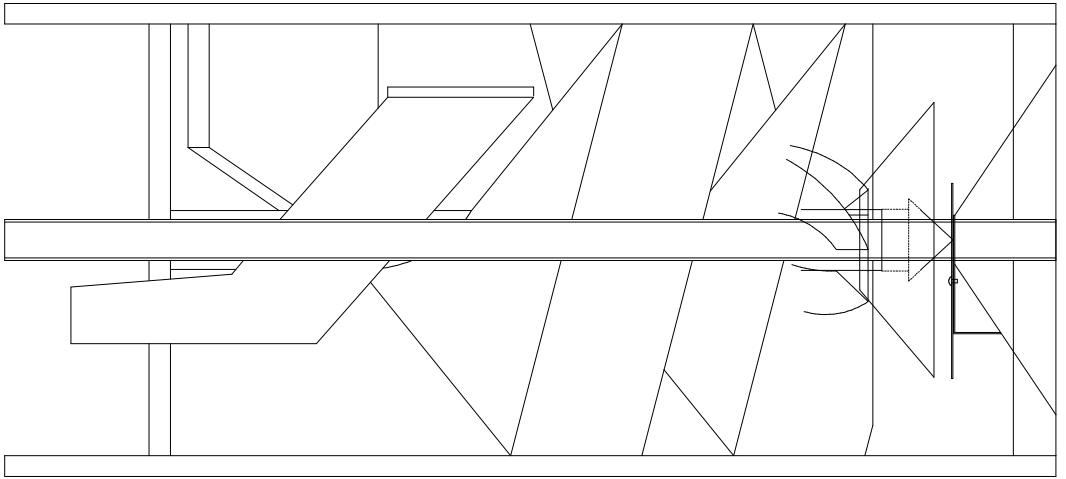
&

**Stainless
Cores
Available**

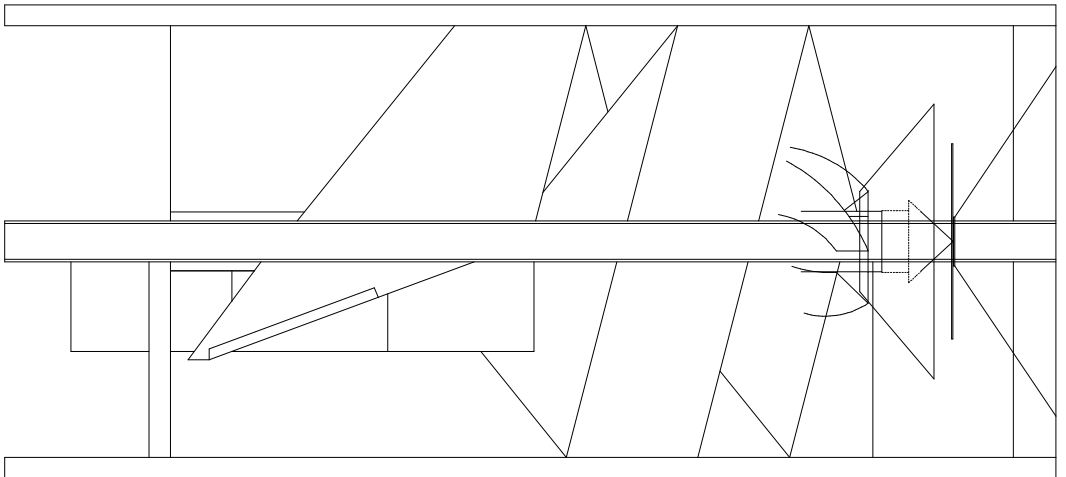


SECTION A

LAB SPIRAL HT-5



HT-5





HT-5 Single open Spiral Separator

LAB SAMPLER

- **Operates by Gravity**
- **No Power Required**

⇒ **Capacity 5 BPH**

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.

48 inches Tall



HT-5

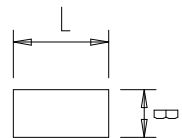
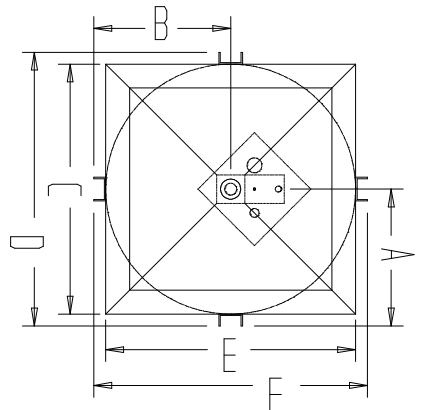
Operates by gravity . . . The Single separator contains one unit of 5 spiral flights fed from a hopper at the top. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in each unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom near the center of the unit.

No power required . . . Since there are no moving parts, no power is required to operate the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

Different pitched spiral core flighting can be offered.

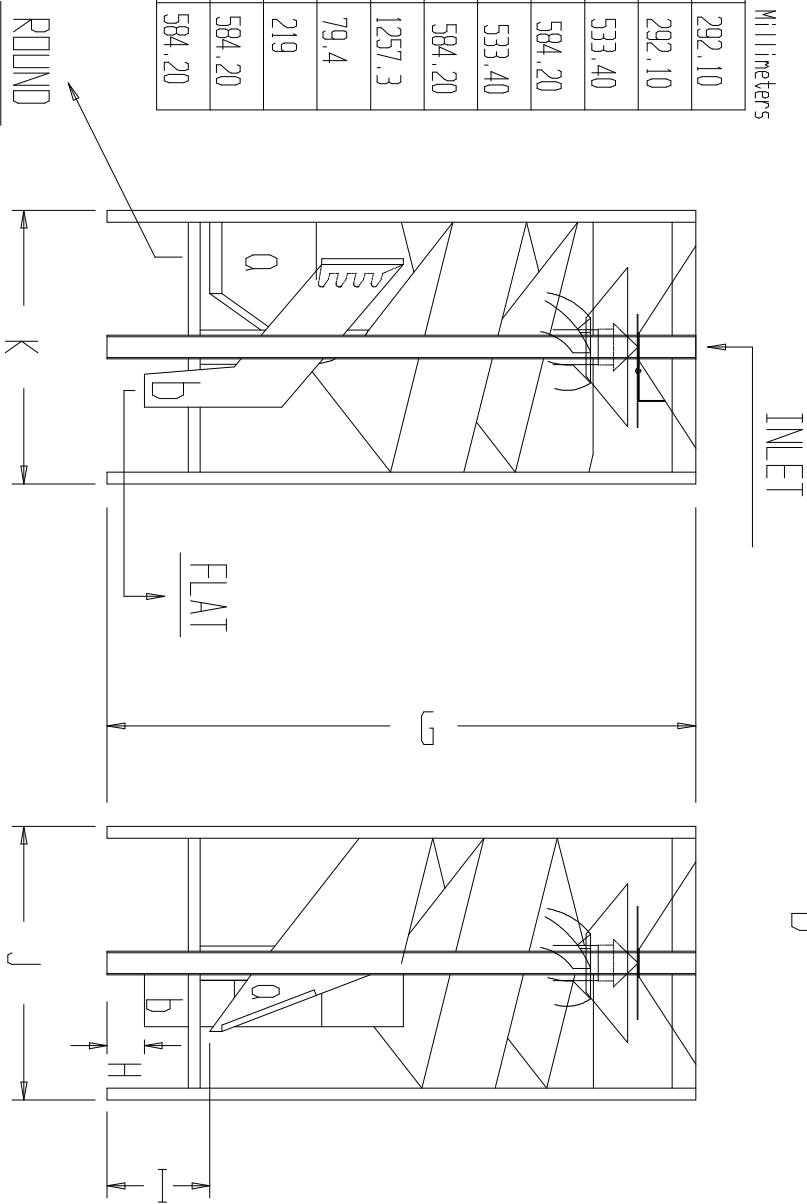
(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.



Inches	
A	6
B	1
C	4 3/8
D	2 3/4
Millimeters	
A	152.40
B	25.40
C	111.12
D	70.10

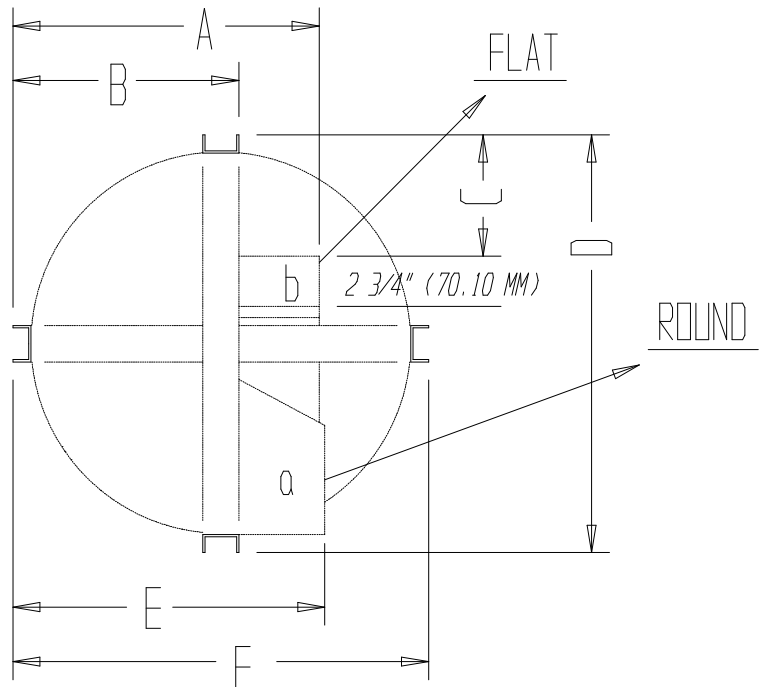
	Inches	Millimeters
A	11 1/2	292.10
B	11 1/2	292.10
C	21	533.40
D	23	584.20
E	21	533.40
F	23	584.20
G	49.5	1257.3
H	3 1/8	79.4
I	8 5/8	219
J	23	584.20
K	23	584.20



FOOT PRINT 1 - B

DATE: 2005	<i>HT-5 SPIRAL</i>	Type	
Issued by : MT		STANDARD	
page		HT-5 - < 40.3 >	
		Replaces:	NO. 1 - A

	Inches	Millimeters
A	16 15/16	430.28
B	12 1/2	317.50
C	6 3/4	170.95
D	23	584.20
E	17 1/4	438.15
F	23	584.20



TOP - FRONT - SIDE (1 - A)

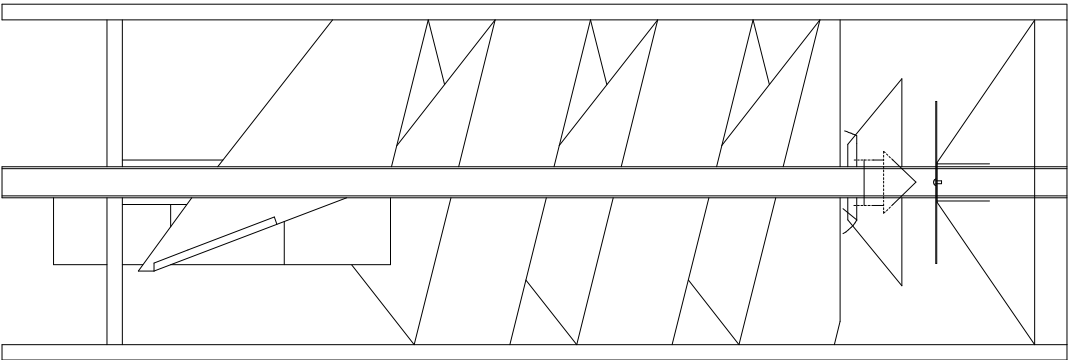
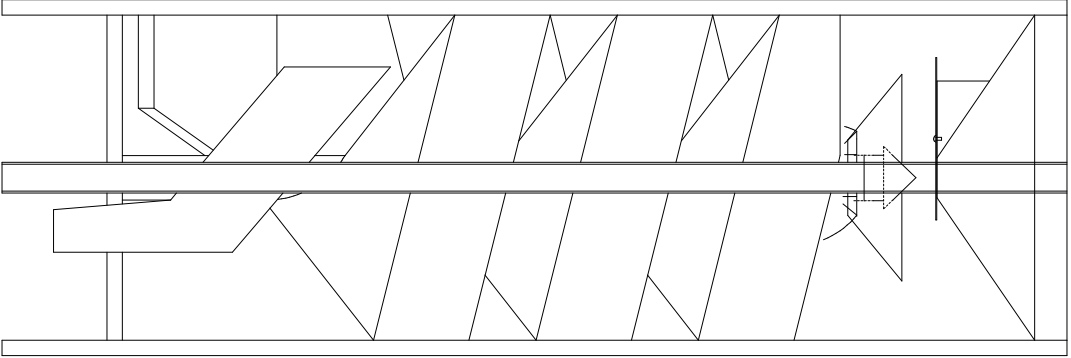
			<div>HT-5</div> <div>FOOT PRINT DRAWING</div>	
				1 - B

SECTION B

**ONE (1) CORE SINGLE OPEN
HT-25 MID SIZE**

With Heavy Duty 16 ga. Hopper

HT-25 MID SIZE With Heavy DutyHopper



The logo consists of a red diamond shape with a black border. Inside the diamond, the letters 'H & T' are written in a white, serif font.

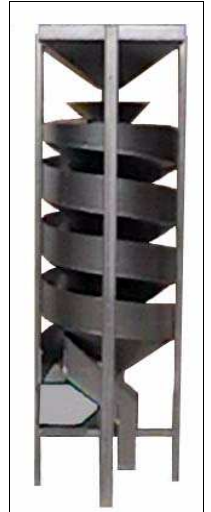
HT-25 MID SIZE Single open Spiral Separator



Operates by Gravity No Power Required

Capacity 25 BPH

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



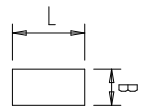
Operates by gravity . . . The Single separator contains one unit of spirals fed from a large hopper at the top, with an adjustable feed cone for the unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in the unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom near the center of the unit.

No power required . . . Since there are no moving parts, no power is required to operate the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

Different pitched spiral core flighting can be offered.

(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.



Inches

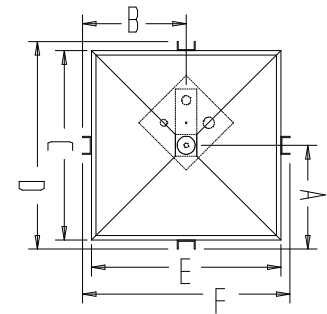
L	B
6	1

4 3/8 2 3/4

Millimeters

L	B
152.40	25.40

111.12 70.10

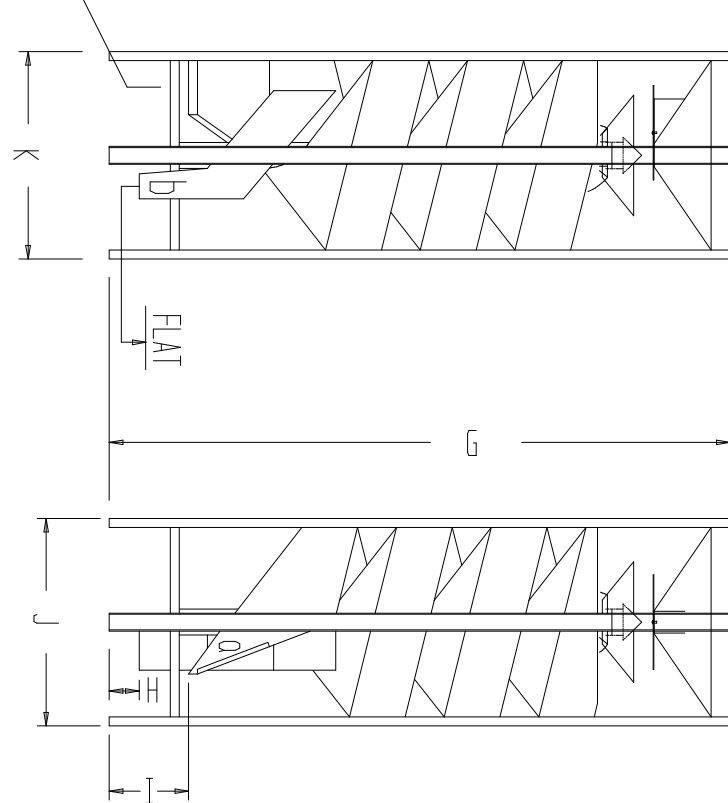


FOOT PRINT 2 - B

Inches Millimeters

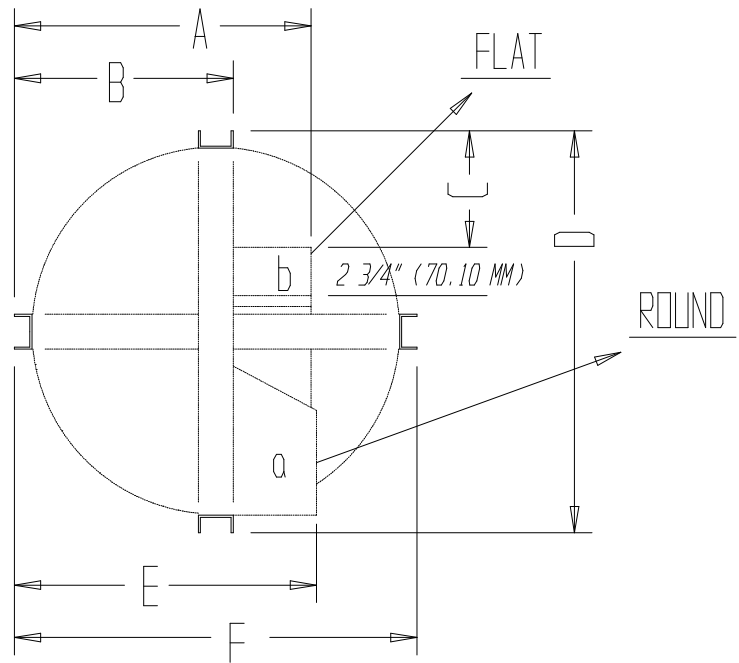
A	11 1/2	292.10
B	11 1/2	292.10
C	21	533.40
D	23	584.20
E	21	533.40
F	23	584.20
G	68 3/4	1746.25
H	3 5/16	84.22
I	8 13/16	223.5
J	23	584.20
K	23	584.20

ROUND



DATE: 2005	<i>SINGLE CORE "OPEN" SPIRAL</i> With " Heavy Duty Hopper "	Type
Issued by: MT		MID SIZE
page		HT-25
		Replaces:
		NO. 2 - A

	Inches	Millimeters
A	16 15/16	430.28
B	12 1/2	317.50
C	6 3/4	170.95
D	23	584.20
E	17 1/4	438.15
F	23	584.20



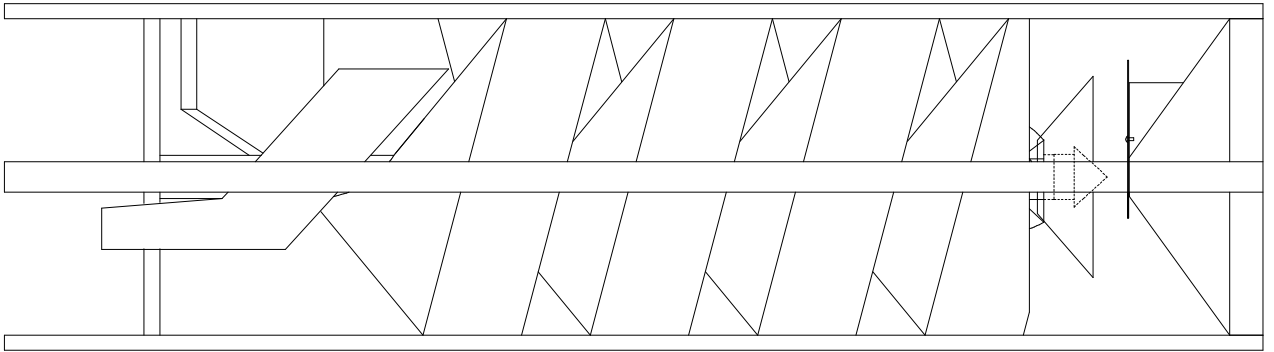
TOP - FRONT - SIDE (2 - A)

			<p><i>HT-25 MID SIZE</i></p> <p><i>SINGLE CORE "OPEN" SPIRAL</i></p> <p>FOOT PRINT DRAWING</p>	
				2 - B

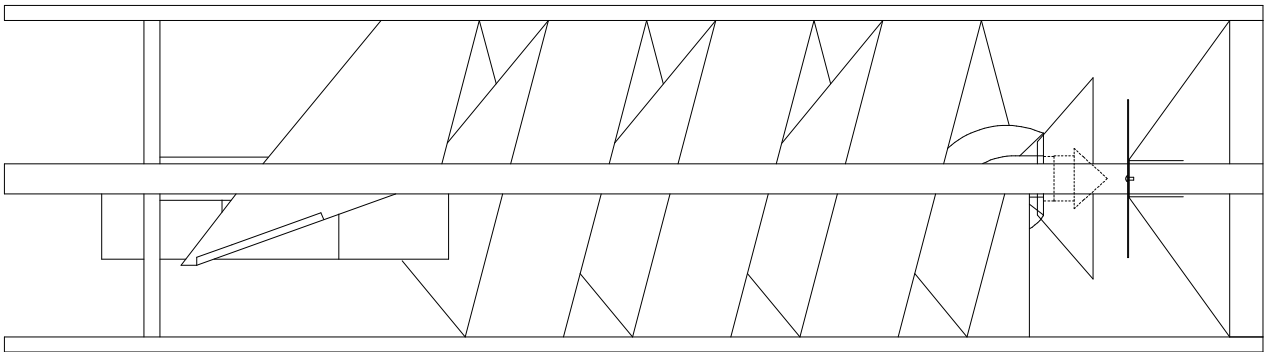
SECTION C

**ONE (1) CORE SINGLE OPEN
HT-25 (Standard Height)**

With Heavy Duty 16 ga. Hopper



HT25

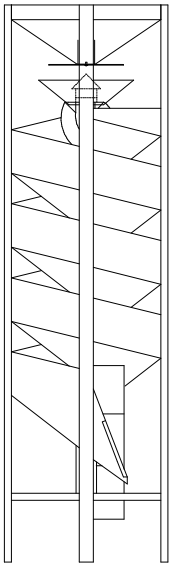


With Heavy Duty Hopper



HT-25

Single open Spiral Separator

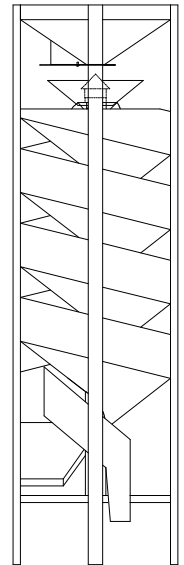


HT-25

Operates by Gravity No Power Required

Capacity 25 BPH

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



HT-25

Operates by gravity . . . The Single separator contains one unit of spirals fed from a large hopper at the top, with an adjustable feed cone for the unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in the unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom near the center of the unit.

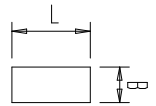
No power required . . . Since there are no moving parts, no power is required to operate

the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

Different pitched spiral core flighting can be offered.

(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

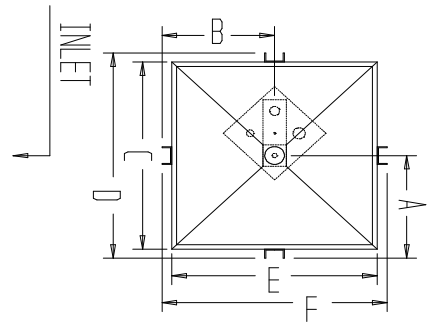


Inches

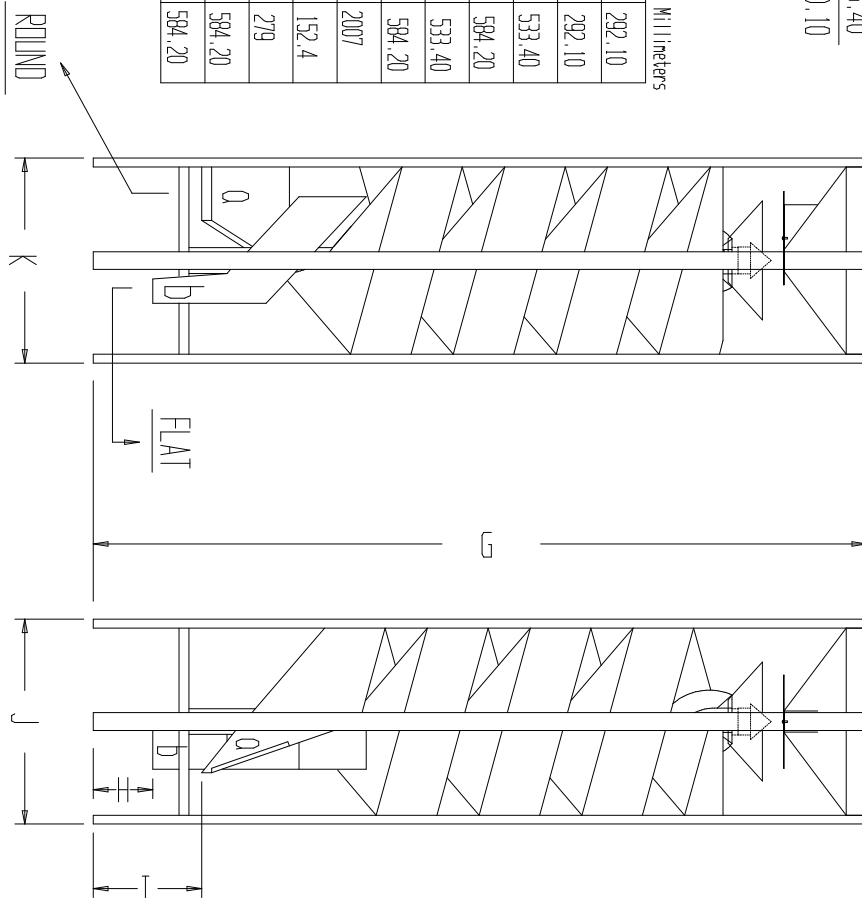
A	L	B
6		1
4 3/8	2 3/4	

Millimeters

A	L	B
152.40	25.40	
111.12	70.10	



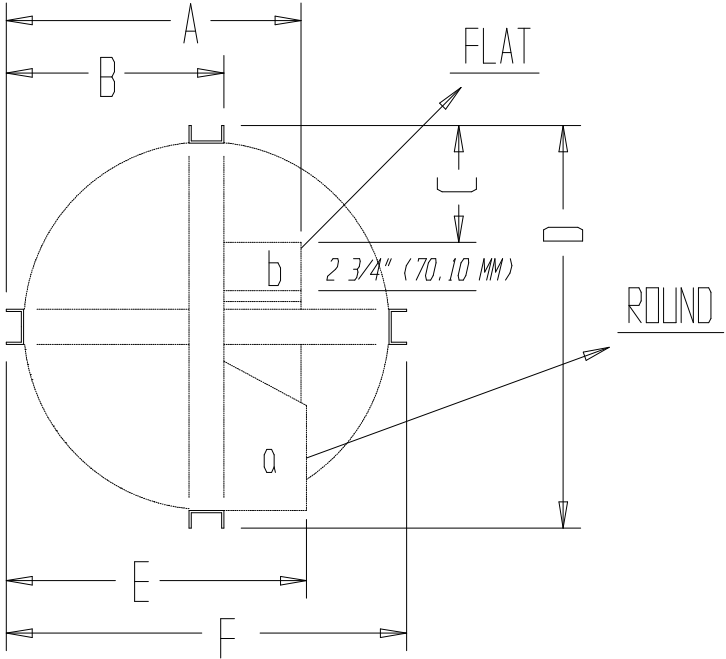
	Inches	Millimeters
A	11 1/2	292.10
B	11 1/2	292.10
C	21	533.40
D	23	584.20
E	21	533.40
F	23	584.20
G	79	2007
H	6	152.4
I	11	279
J	23	584.20
K	23	584.20



FOOT PRINT 3 - B

DATE: 2005	<i>SINGLE CORE "OPEN" SPIRAL</i> With " Heavy Duty Hopper "	Type	
Issued by: MT		STANDARD	
page		HT-25	
		Replaces:	NO. 3 - A

	Inches	Millimeters
A	16 15/16	430.28
B	12 1/2	317.50
C	6 3/4	170.95
D	23	584.20
E	17 1/4	438.15
F	23	584.20



TOP - FRONT - SIDE (3 - A)

HT-25

SINGLE CORE "OPEN" SPIRAL

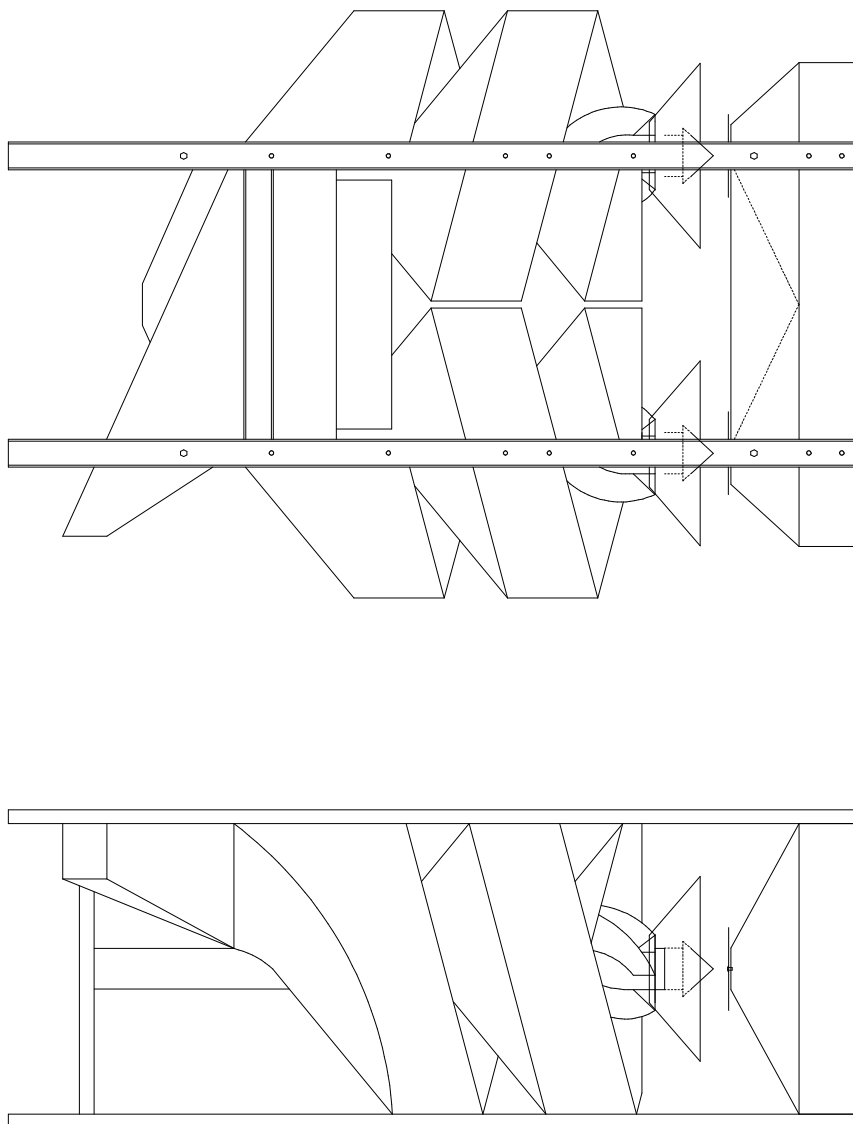
FOOT PRINT DRAWING

3 - B

SECTION D

**TWO (2) CORE, DOUBLE OPEN
HT-50 “SHORTY”**

HT-50 "SHORTY"





HT-50 “Shorty”

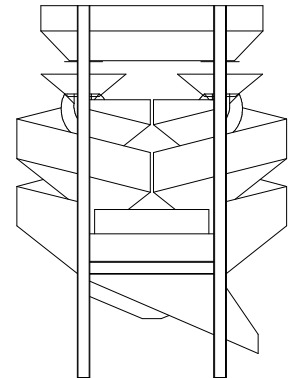
Double open Spiral Separator

Low Profile

- **Operates by Gravity**
- **No Power Required**

⇒ **Capacity 50 BPH**

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



HT-50 Shorty

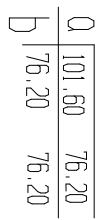
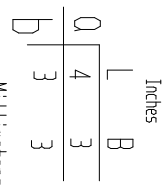
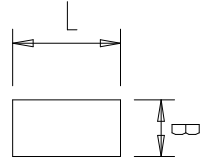
Operates by gravity . . . The Double separator contains two units of spirals fed from a large hopper at the top, with an adjustable feed plate for each unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in each unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom center of the unit.

No power required . . . Since there are no moving parts, no power is required to operate the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

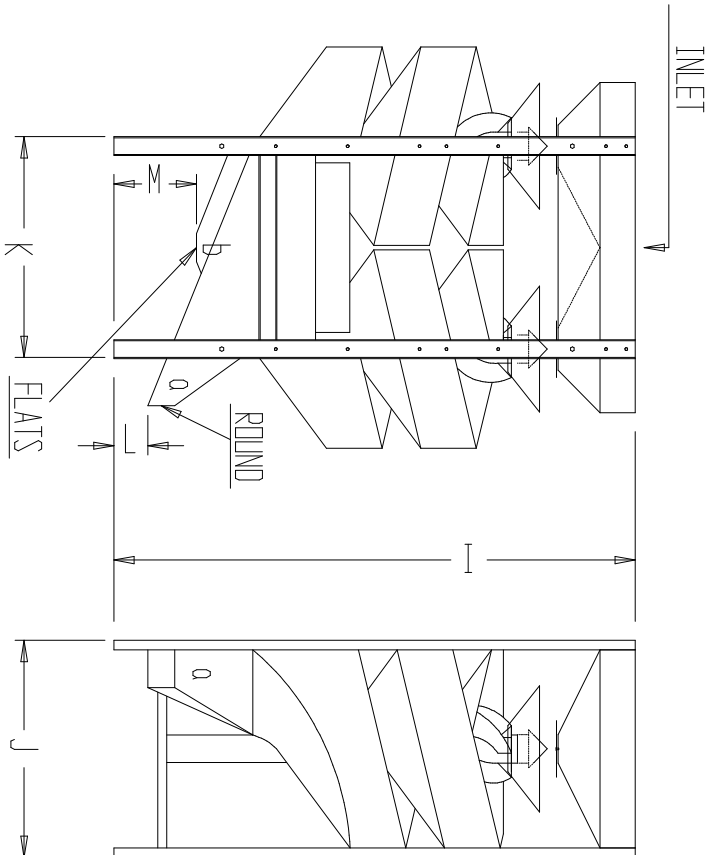
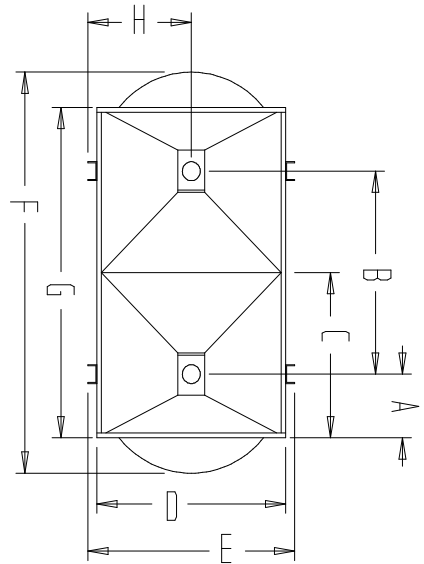
Different pitched spiral core flighting can be offered.

(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.



	Inches	Millimeters
A	6 3/4	171.45
B	21 1/2	546.10
C	17 1/2	444.50
D	21	533.40
E	23	584.20
F	42 1/2	1079.50
G	35	889.00
H	11 1/2	292.10
I	58	1473
J	23	584.20
K	23 1/2	596.90
L	3 3/4	95.26
M	9 3/16	233.36



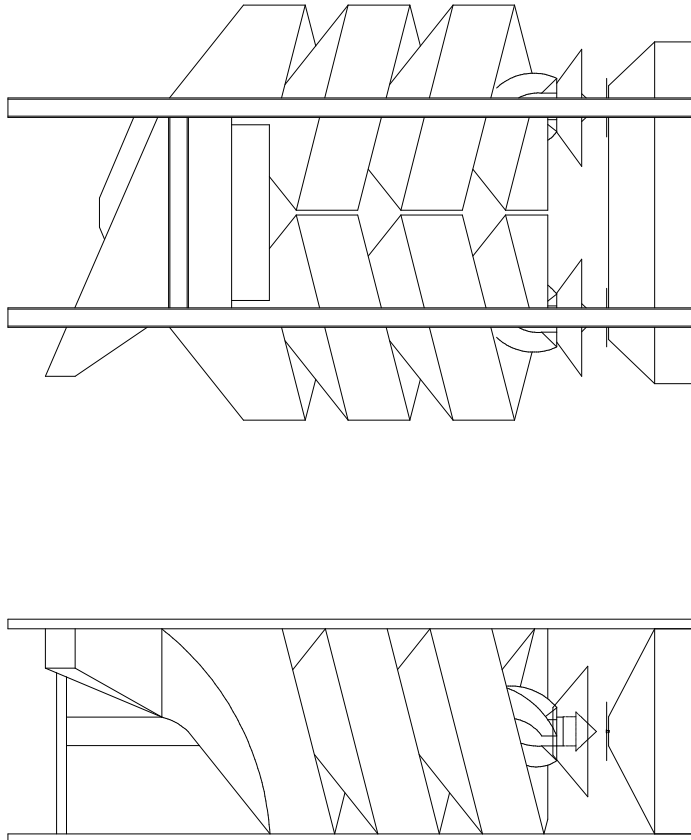
FOOT PRINT 4 - B-2

DATE:	<i>2 CORE " OPEN " SPIRAL</i>	Type	
Issued by		SHORTY 2	
page		HT-50	
		Replaces:	NO. 4 - A-2

SECTION E

**TWO (2) CORE, DOUBLE OPEN
HT-50 MID SIZE**

HT-50 MID SIZE





HT-50 MID SIZE Double open Spiral Separator

- **Operates by Gravity**
- **No Power Required**

⇒ **Capacity 50 BPH**

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



HT-50 MID SIZE

Operates by gravity . . . The Double separator contains two units of spirals fed from a large hopper at the top, with an adjustable feed plate for each unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in each unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom center of the unit.

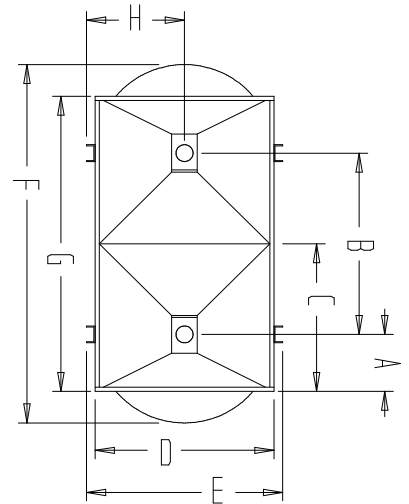
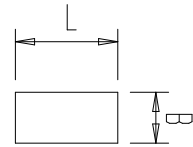
No power required . . . Since there are no moving parts, no power is required to operate

the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

Different pitched spiral core flighting can be offered.

(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

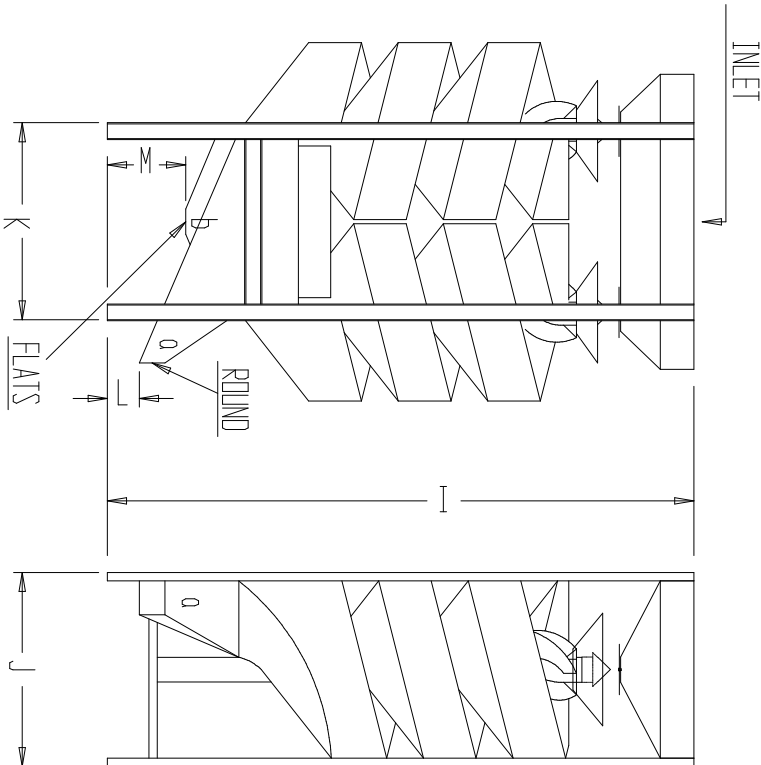


Inches	
A	L
B	B
C	3
D	3

Millimeters

Millimeters	
A	L
B	B
C	76.20
D	76.20

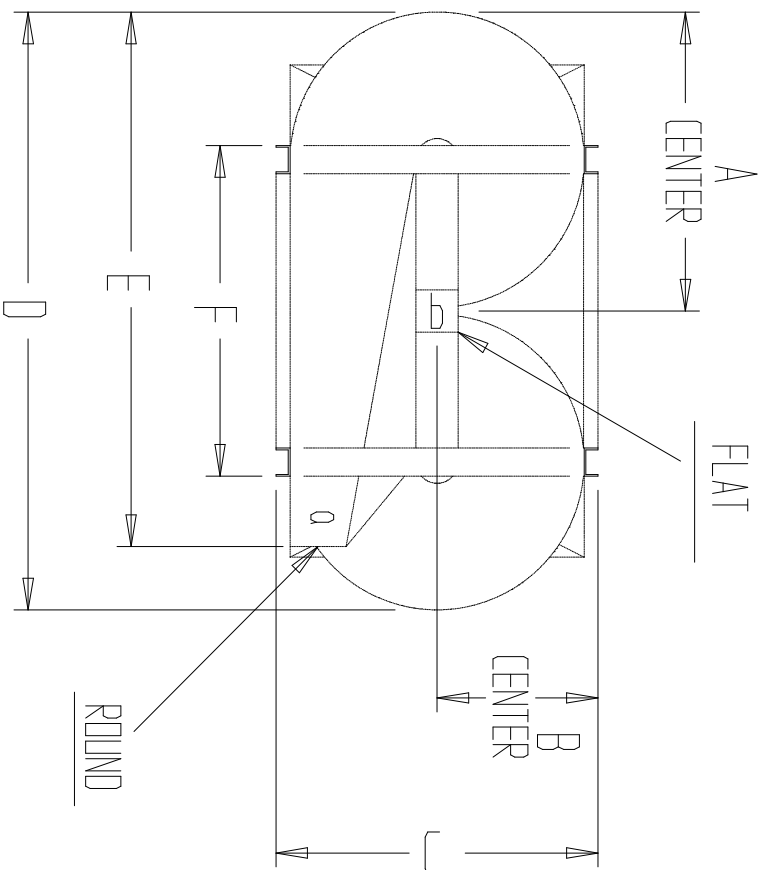
	Inches	Millimeters
A	6 3/4	171.45
B	21 1/2	546.10
C	17 1/2	444.50
D	21	533.40
E	23	584.20
F	42 1/2	1079.50
G	35	889.00
H	11 1/2	292.10
I	68 13/16	1748
J	23	584.20
K	23 1/2	596.90
L	3 3/4	95.25
M	9 3/16	233.36



FOOT PRINT 5 - B

DATE:	<i>2 CORE " OPEN " SPIRAL</i>	Type
Issued by		Mid Size
page		HT-50
Replaces:		NO. 5 - A

	Inches	Millimeters
A	21 1/4	539.75
B	11 1/2	292.10
C	23	584.20
D	42 1/2	1079.50
E	38	965.20
F	23 1/2	596.90



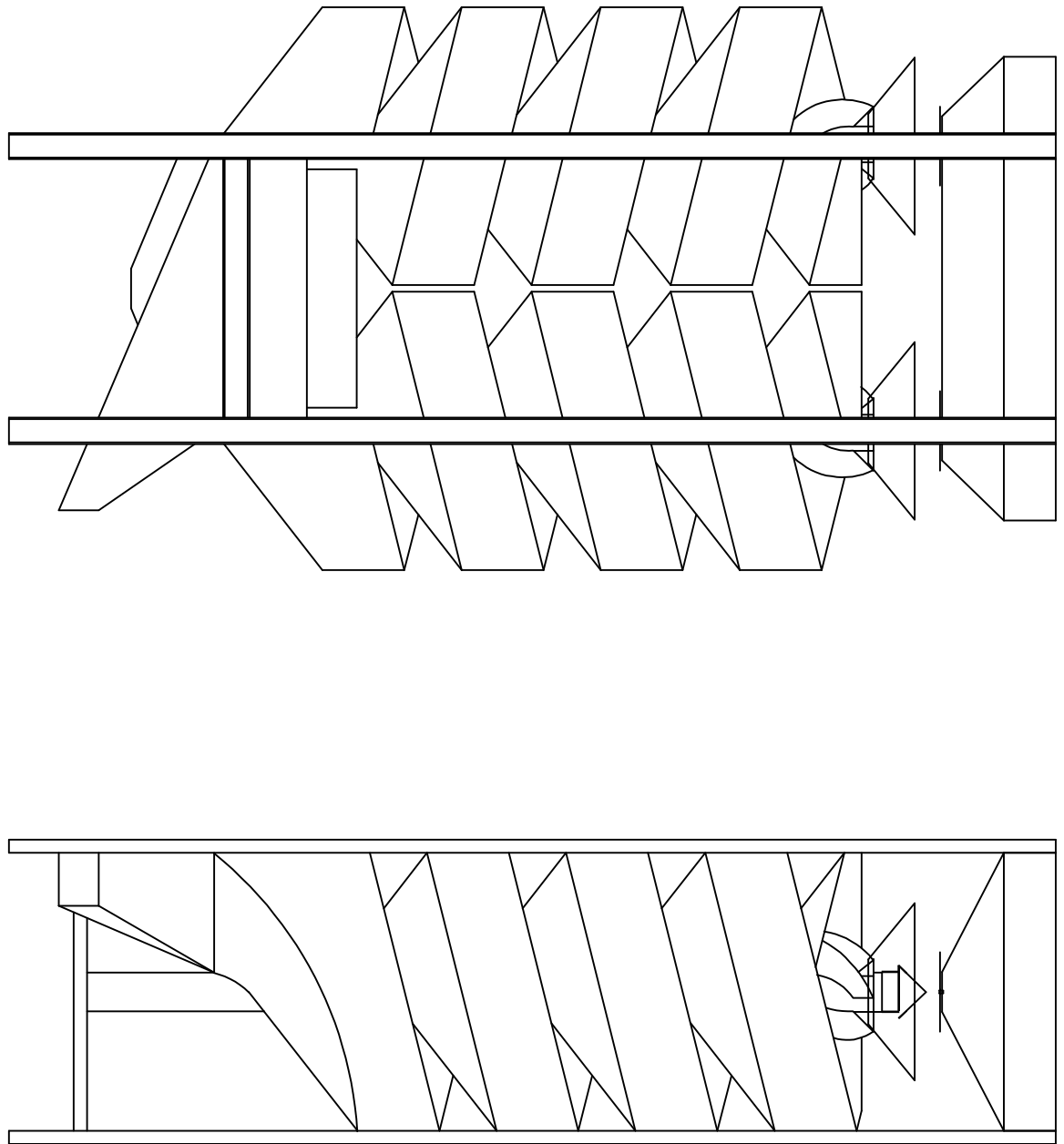
TOP - FRONT - SIDE (5 - A)

[illegible]

SECTION F

**TWO (2) CORE, DOUBLE OPEN
HT-50 (Standard Height)**

HT-50





HT-50 STANDARD

Double open Spiral Separator

- **Operates by Gravity**
- **No Power Required**

⇒ **Capacity 50 BPH**

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



HT-50

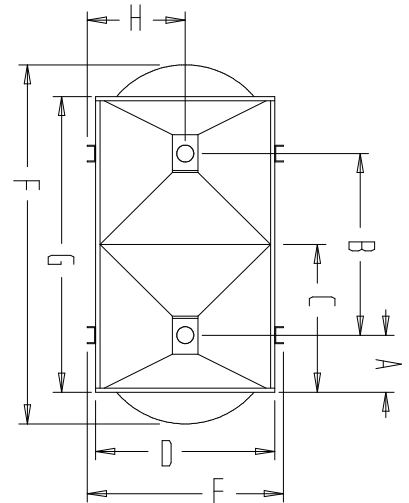
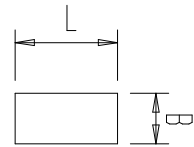
Operates by gravity . . . The Double separator contains two units of spirals fed from a large hopper at the top, with an adjustable feed plate for each unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in each unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom center of the unit.

No power required . . . Since there are no moving parts, no power is required to operate the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

Different pitched spiral core flighting can be offered.

(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

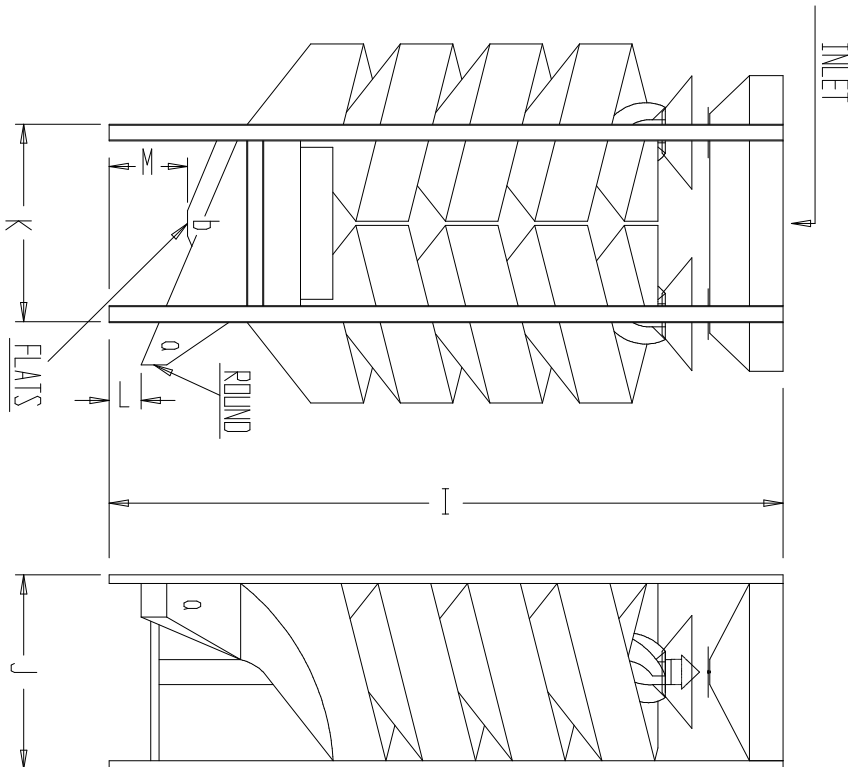
⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.



FOOT PRINT 6 - B

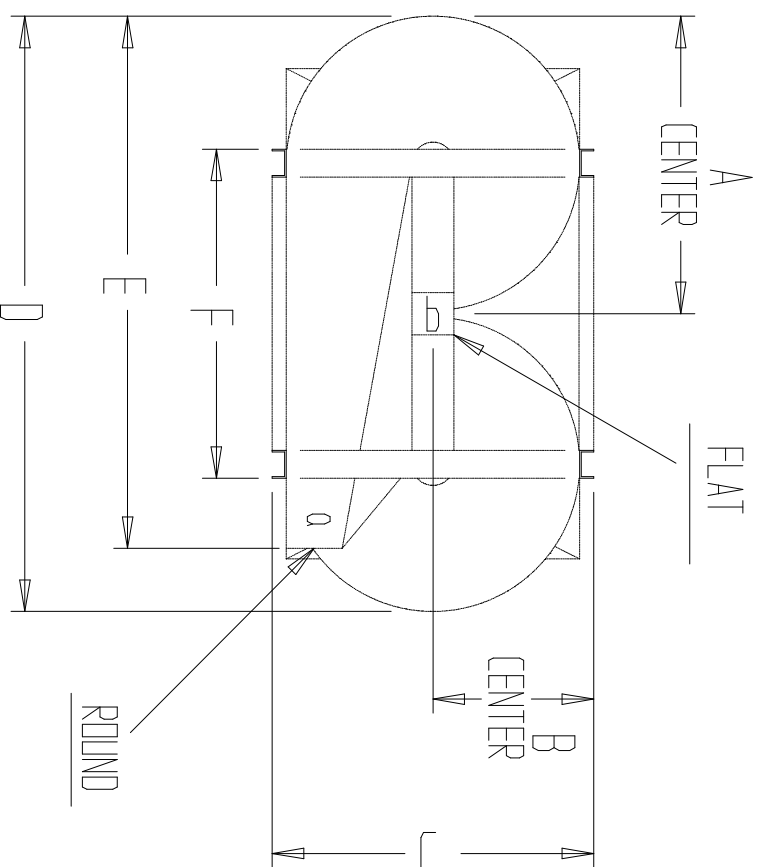
Inches	
Q	L B
4	3
Millimeters	
b	3
L	B
Q	101.60 76.20
b	76.20 76.20

Inches		Millimeters	
A	6 3/4	171.45	
B	21 1/2	546.10	
C	17 1/2	444.50	
D	21	533.40	
E	23	584.20	
F	42 1/2	1079.50	
G	35	889.00	
H	11 1/2	292.10	
I	79	2006.60	
J	23	584.20	
K	23 1/2	596.90	
L	3 3/4	95.26	
M	9 3/16	233.36	



DATE:	<i>2 CORE " OPEN " SPIRAL</i>	Type
Issued by		STANDARD
page		HT-50
Replaces:		NO. 6 - A

	Inches	Millimeters
A	21 1/4	539.75
B	11 1/2	292.10
C	23	584.20
D	42 1/2	1079.50
E	38	965.20
F	23 1/2	596.90



TOP - FRONT - SIDE (6 - A)

[illegible]

SECTION G

**TWO (2) CORE, DOUBLE OPEN
HT-50 ... Standard Height**

“

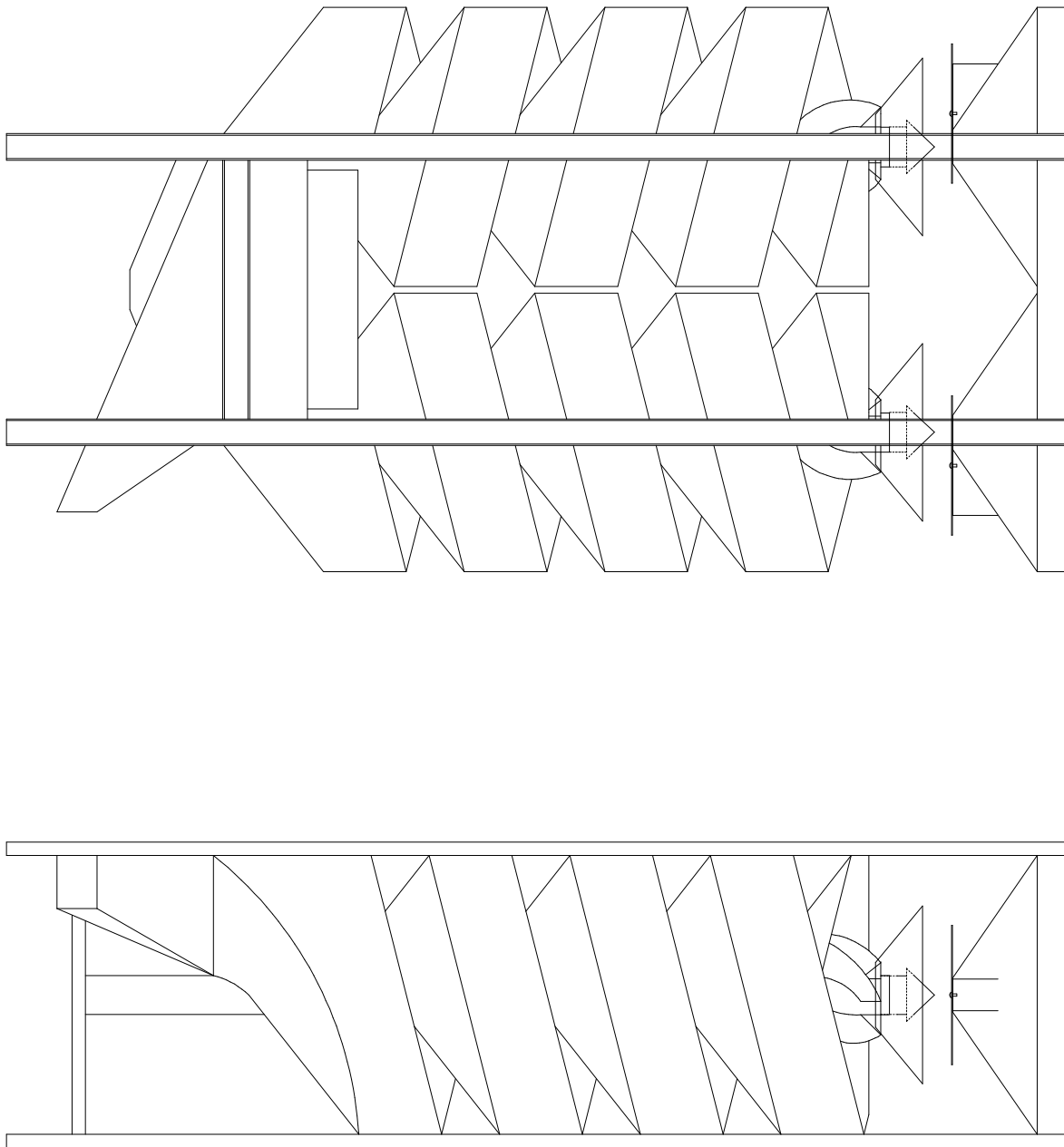
With Heavy Duty

16 ga Hoppers - Self Cleaning

With

“ Rotating Wheel ” Feed Flow Control

HT-50 with "Heavy Duty Hopper"



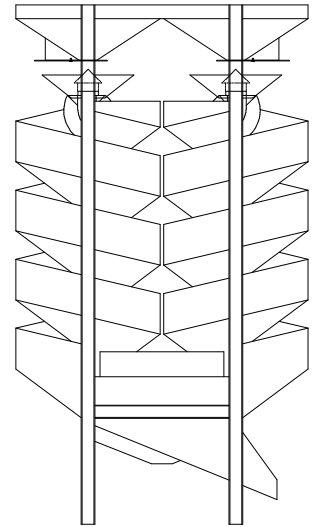


HT-50 Double open Spiral Separator Heavy Hopper

- **Operates by Gravity**
- **No Power Required**

⇒ **Capacity 50 BPH**

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



**HT-50
Heavy Hopper**

Operates by gravity . . . The Double separator contains two units of spirals fed from a large hopper at the top, with an adjustable feed plate for each unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in each unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom center of the unit.

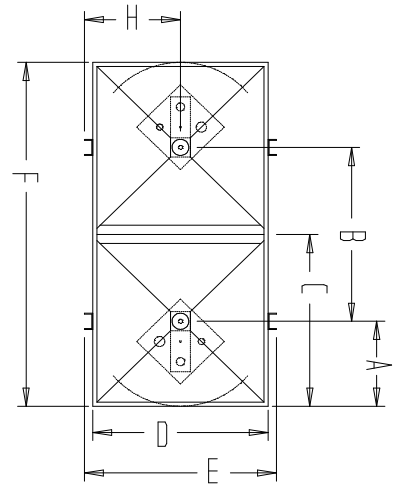
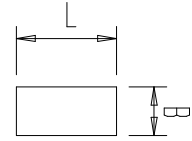
No power required . . . Since there are no moving parts, no power is required to operate

the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame.

Different pitched spiral core flighting can be offered.

(This flighting can be furnished in Galvanized metal up to 22 guage & 26 guage Stainless)

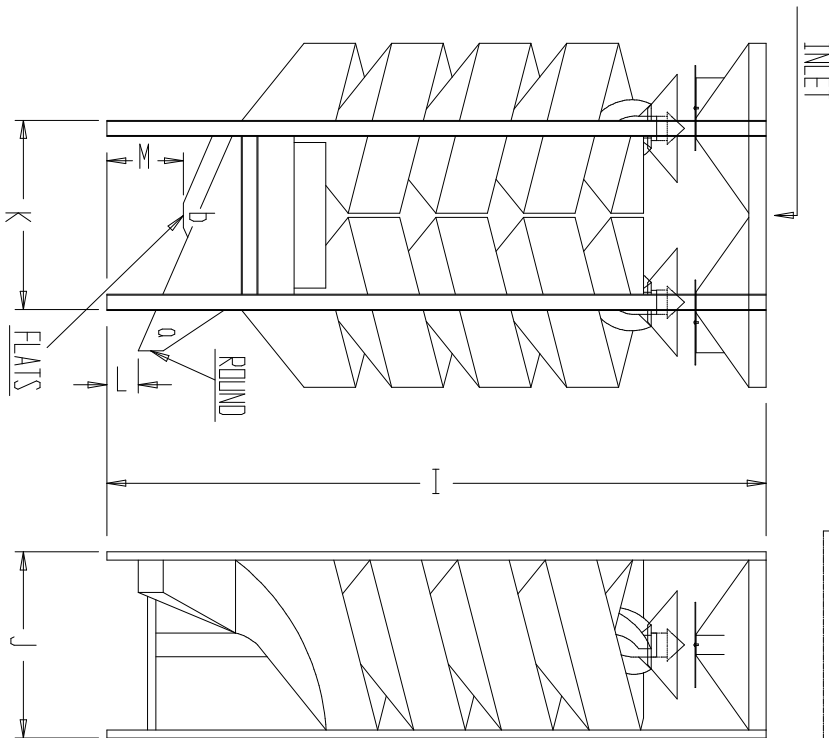
⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.



FOOT PRINT 7 - B

Inches		Millimeters	
A	10 1/2	266.7	
B	21 1/2	546.10	
C	21 1/4	539.75	
D	21	533.40	
E	23	584.20	
F	42 1/2	1079.50	
G			
H	11 1/2	292.10	
I	79	2006.60	
J	23	584.20	
K	23 1/2	596.90	
L	3 3/4	95.26	
M	9 3/16	233.36	

Inches		Millimeters	
A	10 1/2	266.7	
B	21 1/2	546.10	
C	21 1/4	539.75	
D	21	533.40	
E	23	584.20	
F	42 1/2	1079.50	
G			
H	11 1/2	292.10	
I	79	2006.60	
J	23	584.20	
K	23 1/2	596.90	
L	3 3/4	95.26	
M	9 3/16	233.36	



DATE:	<i>2 CORE " OPEN " SPIRAL</i> With " Heavy Duty Hopper "	Type
Issued by		STANDARD
page		HT-50
Replaces:		NO. 7-A

SECTION G

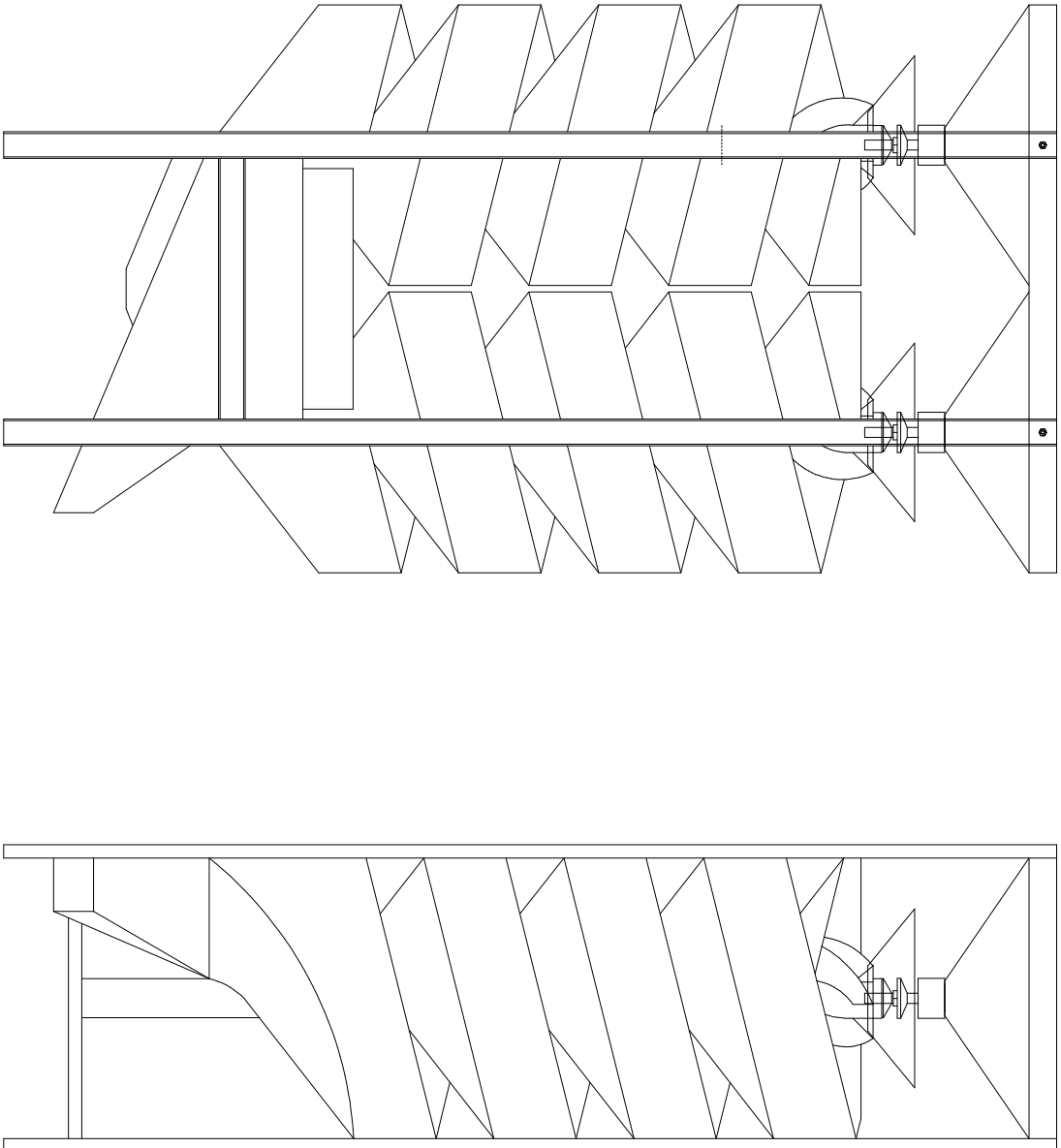
TWO (2) CORE, DOUBLE OPEN HT-50 STANDARD

“ EXTRA HEAVY DUTY “
(Steel Shot & Abrasives)

Flighting Thickness: 26 to 22 ga
Galvanize or Stainless

Flighting Widths can be :
3 - 3.5 - 4 - 4.5 - 5 - 5.5 - 6 - 6.5

With Heavy Duty
16 - 14 ga. Hoppers - Self Cleaning
“ Lined Spouting ”



HT-50 with "Heavy Duty Hopper & Solid Steel Flow Control"



HT-50

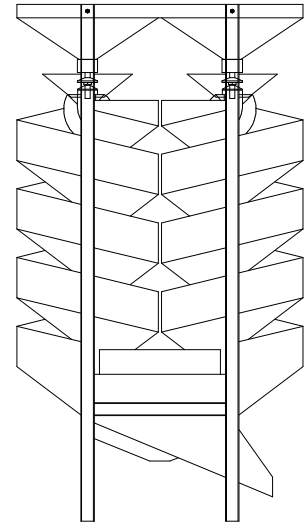
Double open Spiral Separator Extra Heavy Duty

- **Operates by Gravity**
- **No Power Required**

⇒ **Capacity 50 BPH - Soy**

: This unit can be used in Abrasives :

This Separator is used for removing giant morning glory from soybeans. Removes mustard, wild peas, vetch, cockle, soybeans or any round seed from wheat, rye, barley, oats, flaxseed and other grains, screenings or seeds.



**HT-50
Extra Heavy Duty**

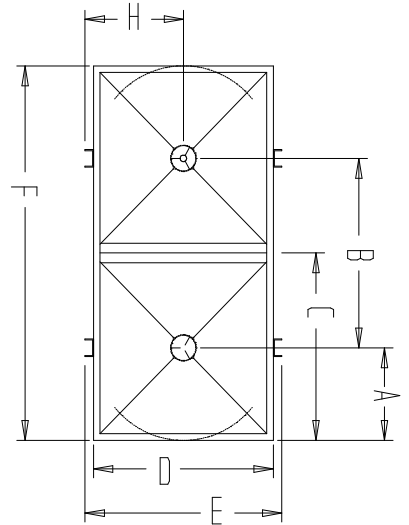
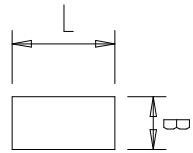
Operates by gravity . . . The Double separator contains two units of spirals fed from a large hopper at the top, with an adjustable feed plate for each unit. The seed leaving the hopper runs over a cone divider which spreads the feed evenly to each of the five flights in each unit. Going down the flights the round kernels travel at a much faster speed than the kernels which are not round. Their momentum increases until the round seeds run over the edge of the inner spirals, drop into the outer spiral, and discharge through a spout at the bottom side of the machine. The non-round seed remains on the small flights and slides down to a separate discharge spout at the bottom center of the unit.

No power required . . . Since there are no moving parts, no power is required to operate the machine. When the feed has been properly set, the separator continues to operate automatically as long as there is grain in the hopper. Constructed of galvanized non-rust iron in a strong steel frame. Different pitched spiral core flighting can be offered.

- This flighting can be furnished in Galvanized metal up to 22 guage & 20 guage Stainless -
Flighting Widths - 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5

(Hopper - 14 ga with Solid Steel Flow Control & Inserts for More Precise Flow Adjustment)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

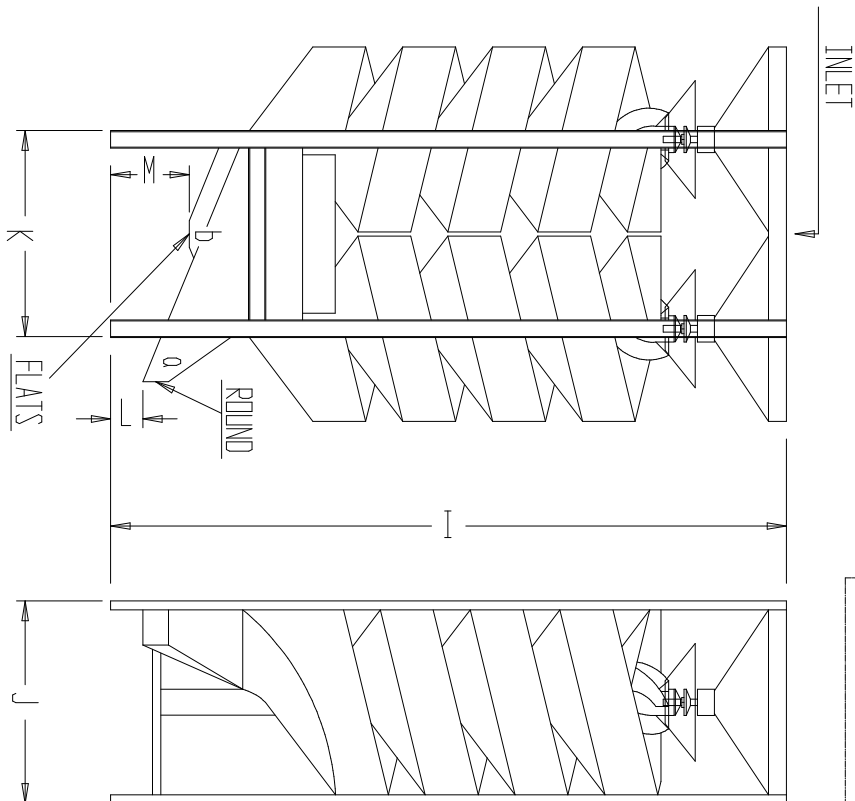


HEAVY DUTY
FEED SYSTEM

FOOT PRINT 7 - B

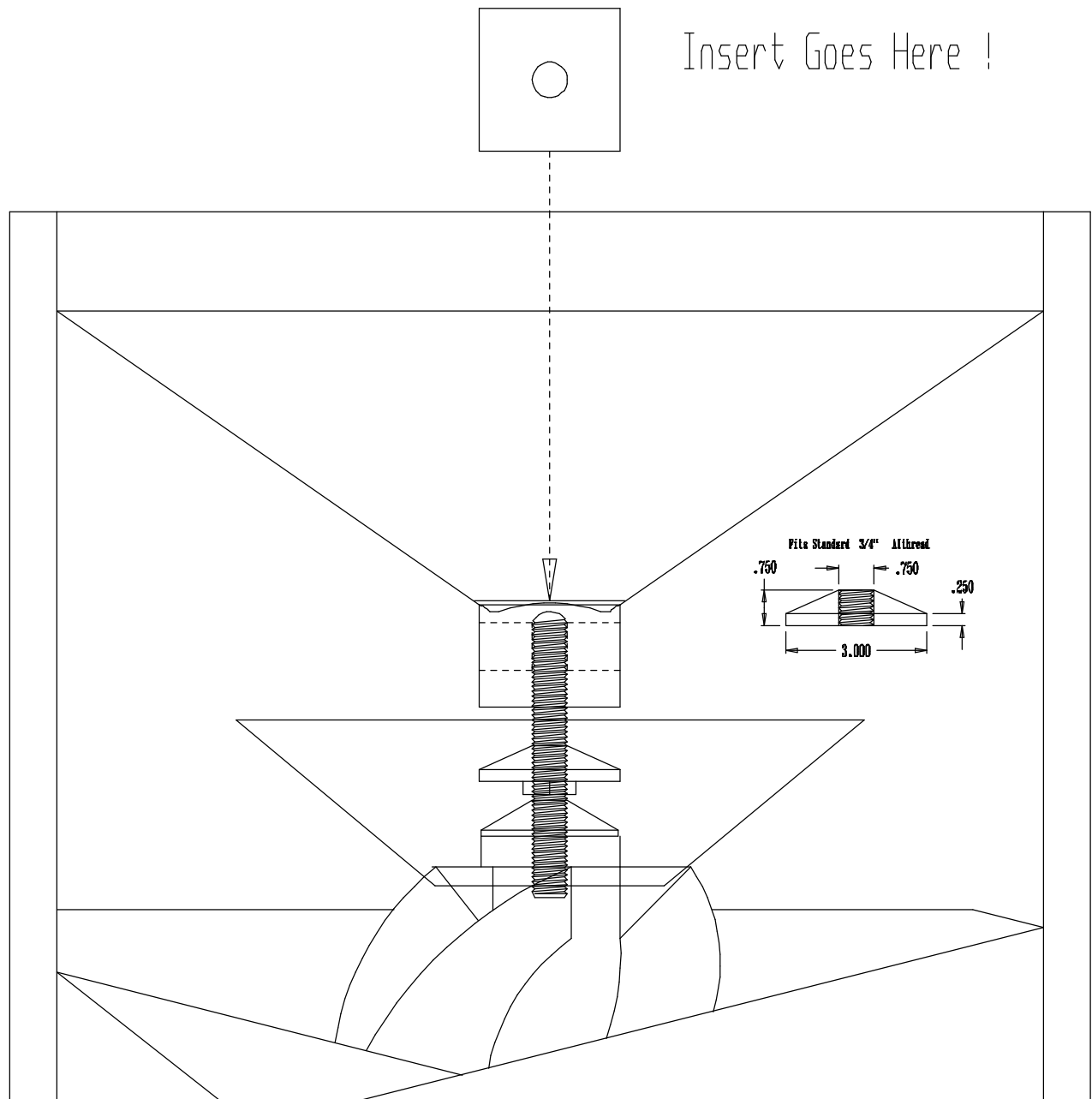
Inches	
A	L
B	B
Millimeters	
a	l
b	b
Inches	
A	L
B	B
Millimeters	
a	l
b	b

Inches	
A	10 1/2
B	21 1/2
C	21 1/4
D	21
E	23
F	42 1/2
G	
H	11 1/2
I	79
J	23
K	23 1/2
L	3 3/4
M	9 3/16
Millimeters	
A	266.7
B	546.10
C	539.75
D	533.40
E	584.20
F	1079.50
G	
H	292.10
I	2006.60
J	584.20
K	596.90
L	95.26
M	233.36

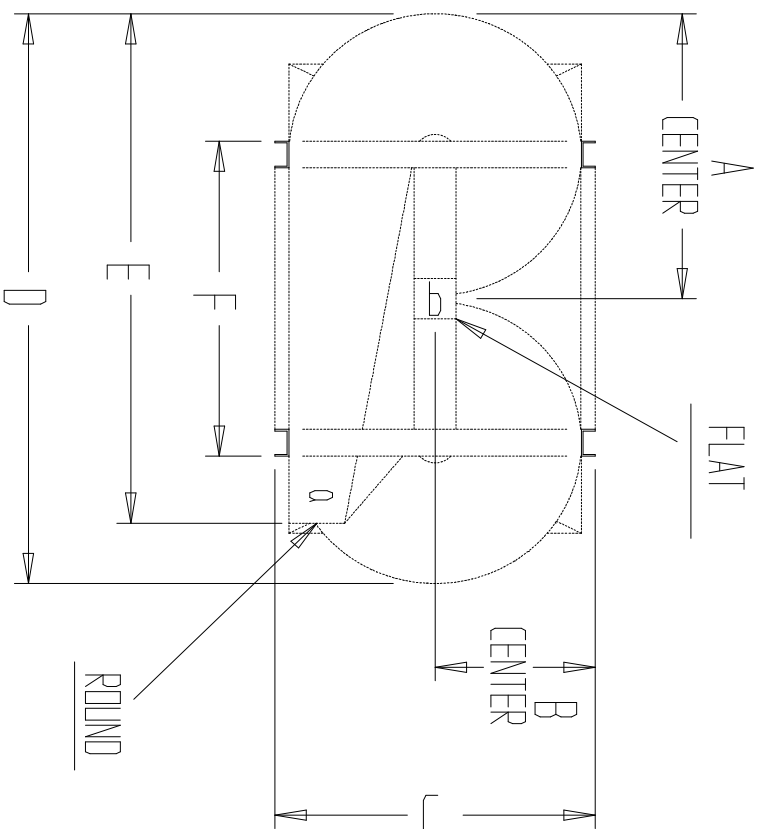


DATE:	<i>2 CORE " OPEN " SPIRAL</i> With " Heavy Duty Hopper "	Type	
Issued by		STANDARD	
page		HT-50	
		Replaces:	NO. 7-A

HEAVY DUTY FLOW CONTROL



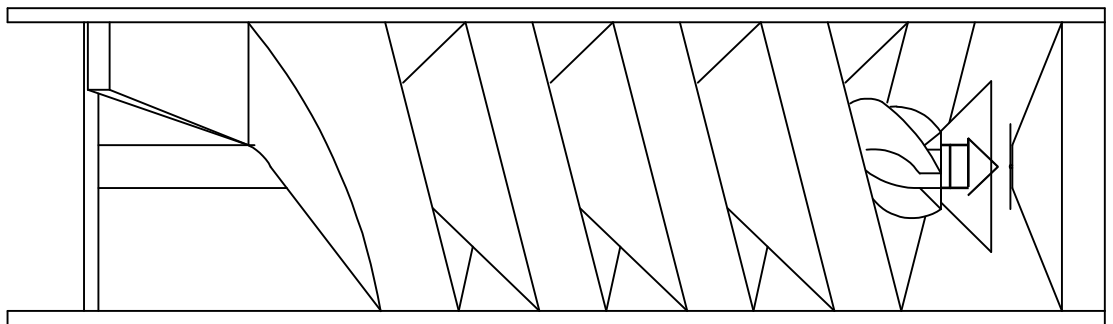
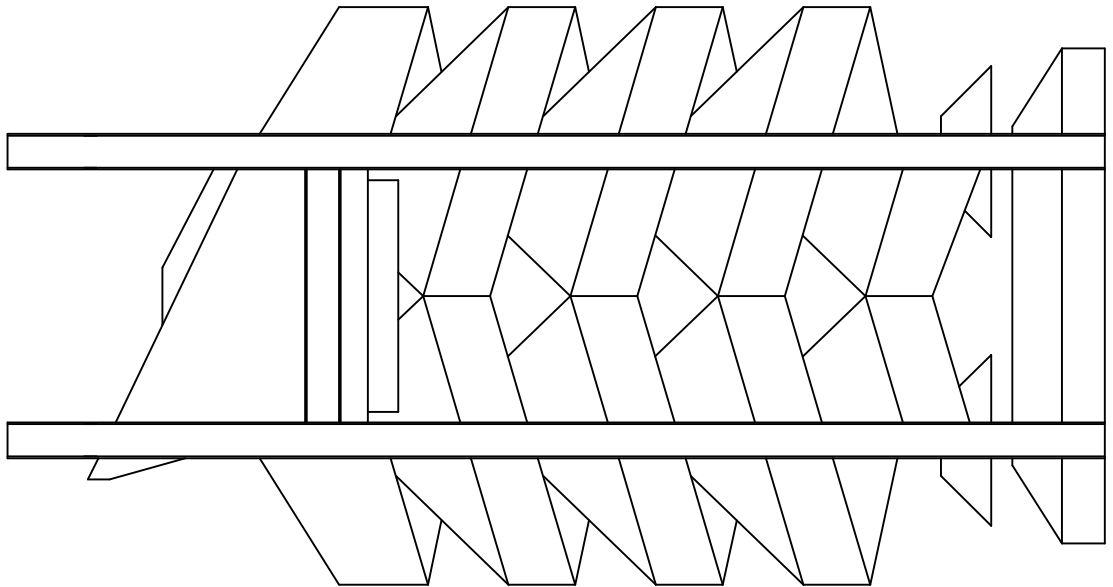
	Inches	Millimeters
A	21 1/4	539.75
B	11 1/2	292.10
C	23	584.20
D	42 1/2	1079.50
E	38	965.20
F	23 1/2	596.90

[illegible]

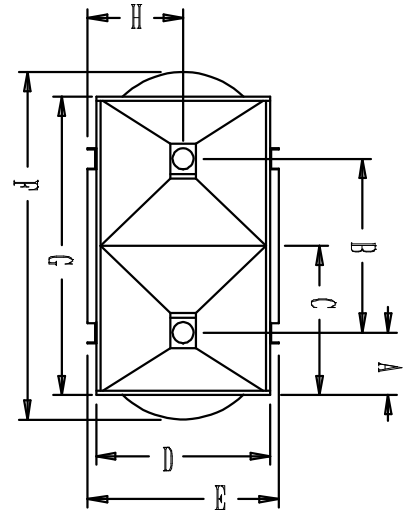
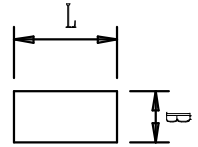
SECTION H

TWO (2) CORE, DOUBLE OPEN CELAND TYPE

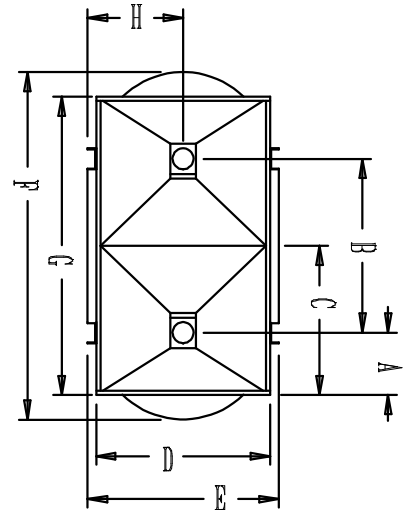
CLEVELAND



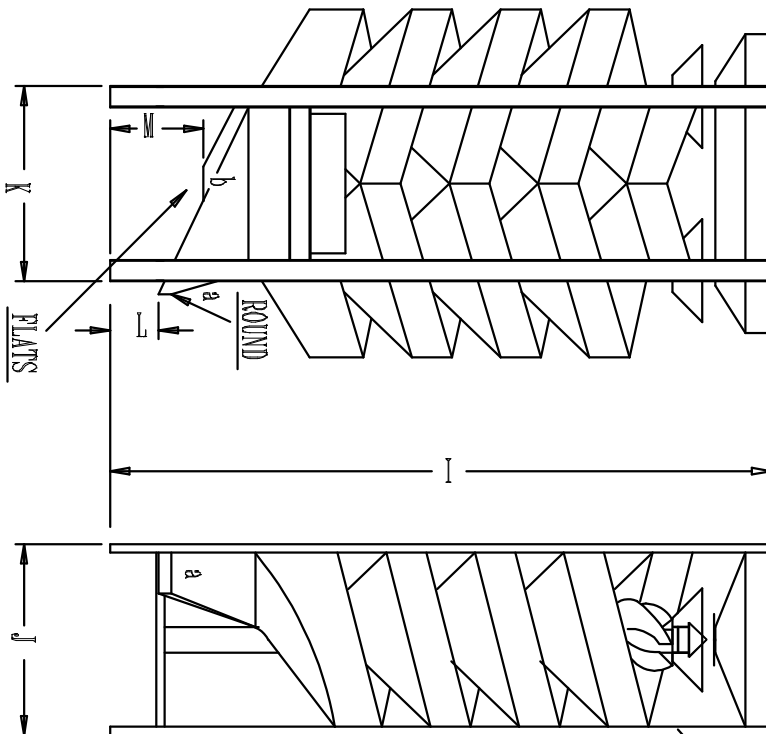
CELLAND
PICTURE
GOES HERE



CLELLAND



INLET



Inches		Millimeters	
a	L	B	
b	4	3	
a	L	B	
b	101.60	76.20	

Inches	Millimeters
A	7.25
B	20.25
C	17.38
D	20.25
E	22.25
F	40.50
G	34.75
H	11.13
I	77
J	22.25
K	22.75
L	5.65
M	10.88

DATE:	2 CORE " OPEN " SPIRAL	Type
Issued by		CLELAND
page		
		Replaces:
		NO.

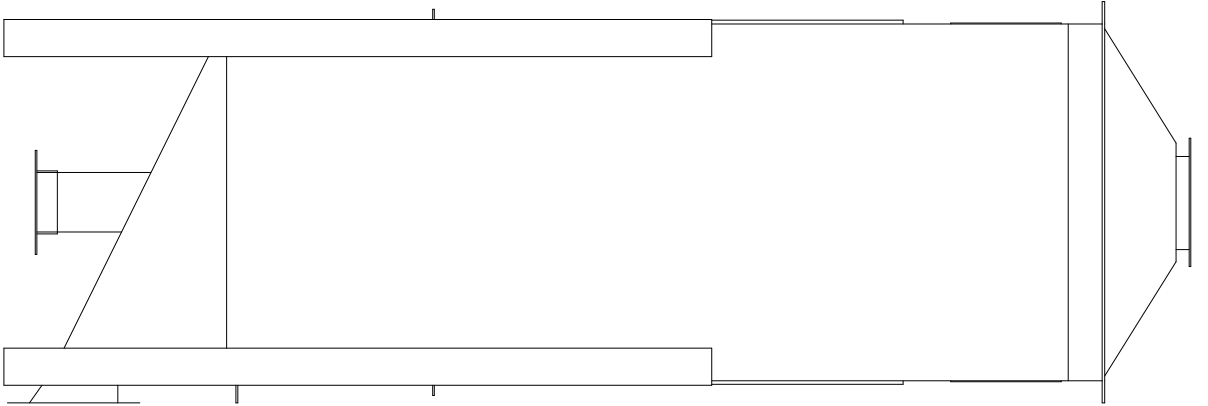
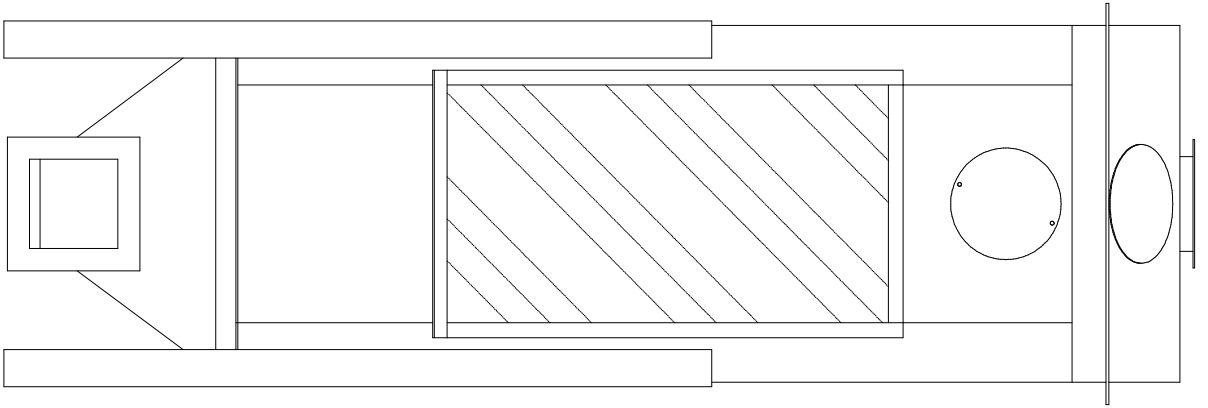


**HT - 200
&
HT - 300**

SECTION I

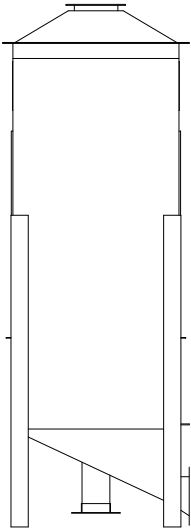
ONE (1) CORE
ENCLOSED SPIRAL
HT-50E

HT-50E



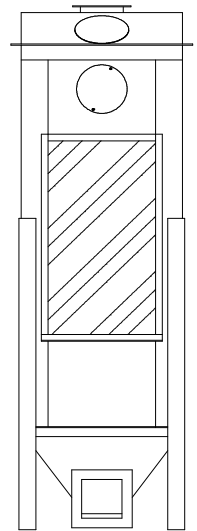


HT-50E Enclosed Spiral Separator



Completely Enclosed For

- ◆ **Dust Control**
- ◆ **Quiet Operation**
- ◆ **Compactness**
- ◆ **Ease of Handling**



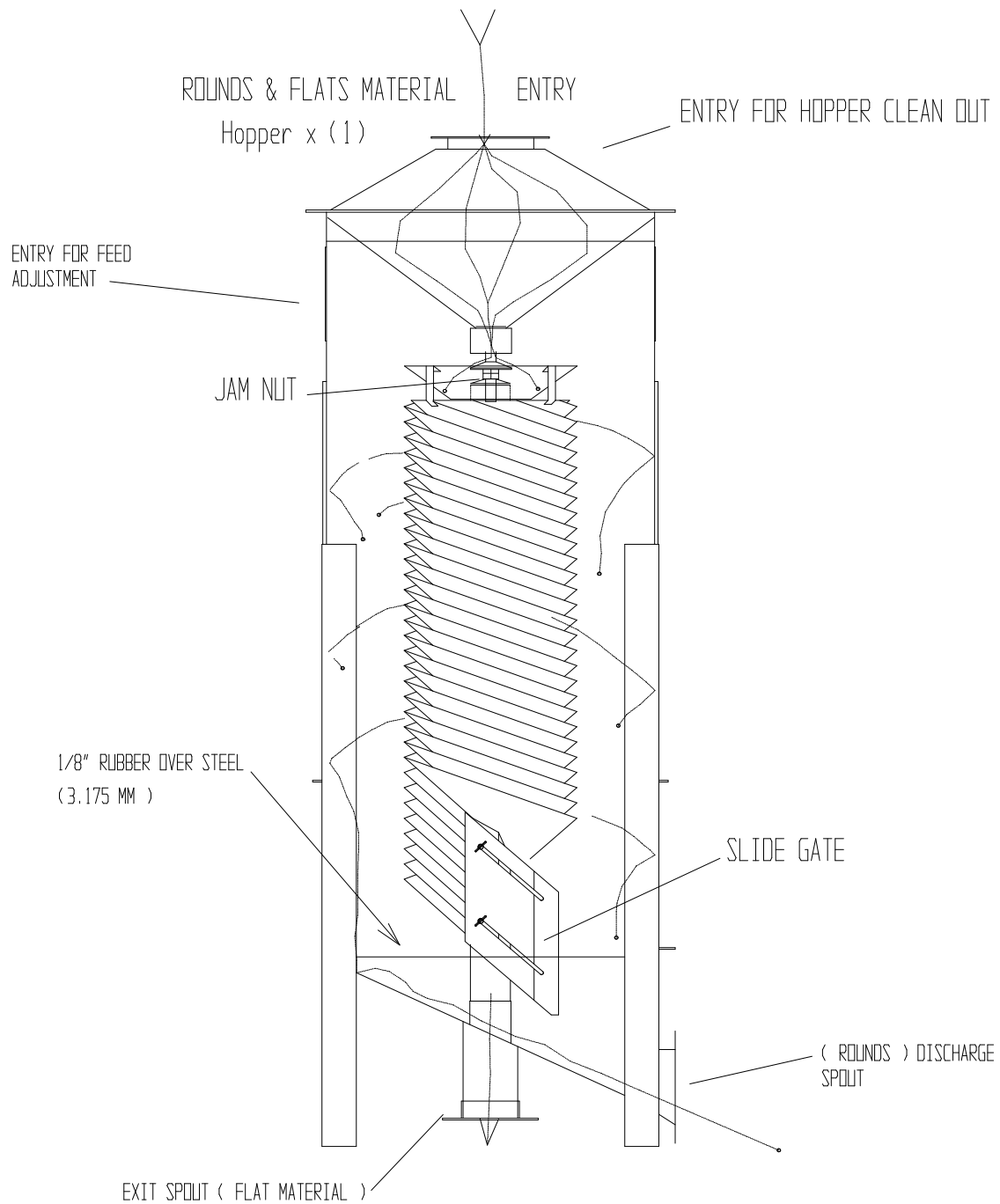
HT-50E

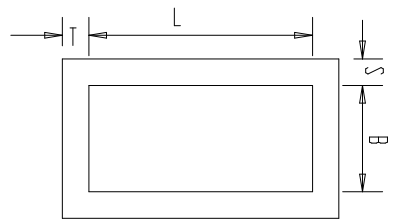
⇒ **High Capacity 50 BPH**

- ◆ Each unit contains (1) independent soldered, galvanized Spiral Core Cartridge with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ◆ Integral self-cleaning hopper
- ◆ Deflectors included for fine tuning separation
- ◆ One (1) access door for easy entrance to internal components (2 doors optional)
- ◆ Heavy 14 gauge body construction with rubber cushioned seed discharge points
- ◆ Legs 3/16" Flanges 1/8"
- ◆ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 24 gauge Stainless)

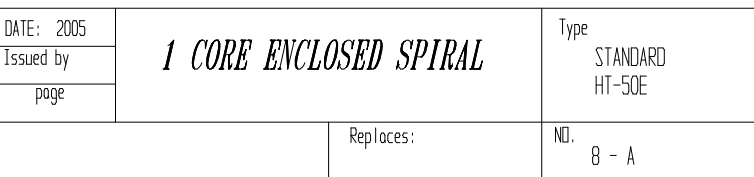
⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

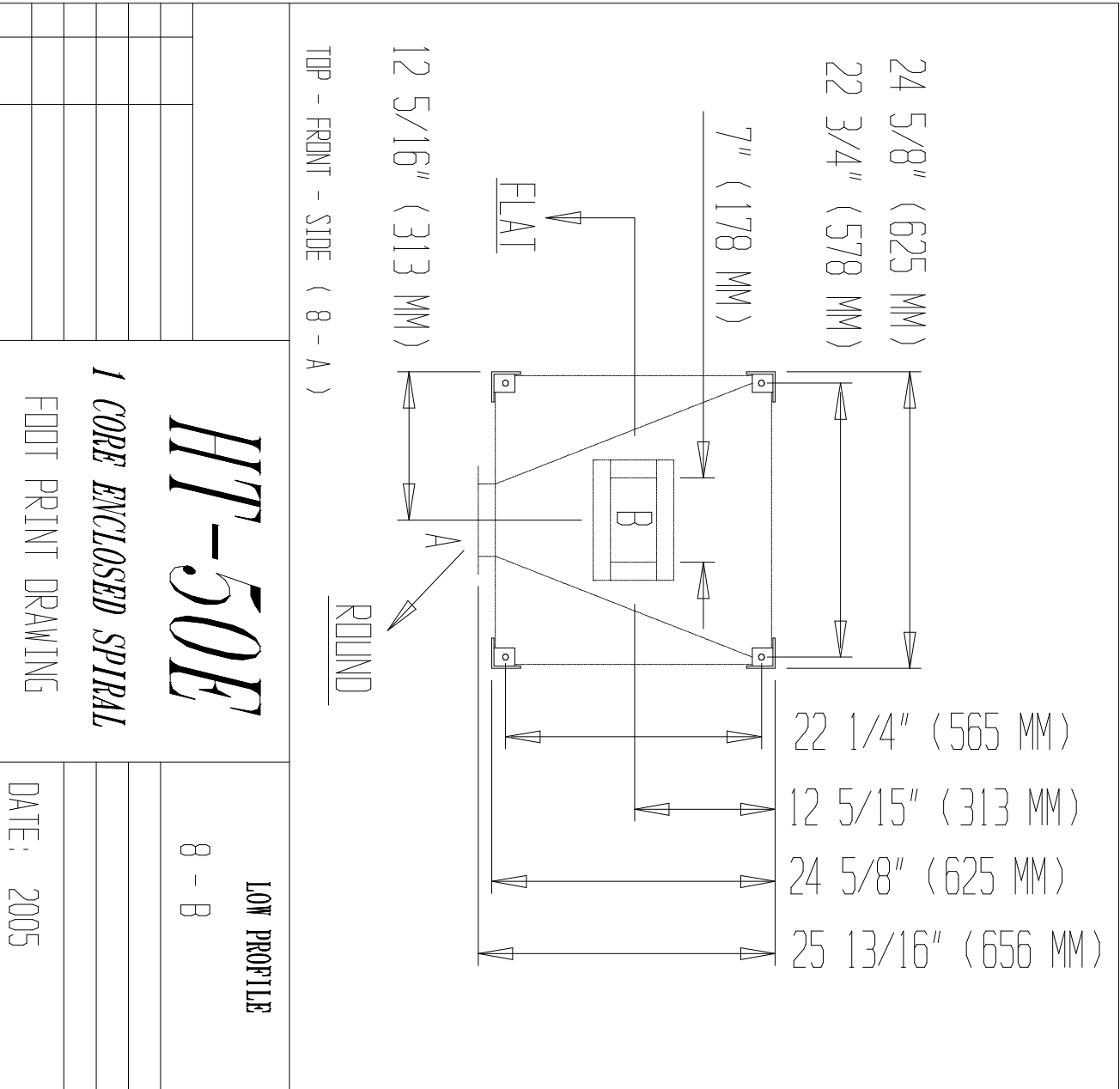
BASIC HT-50E BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)





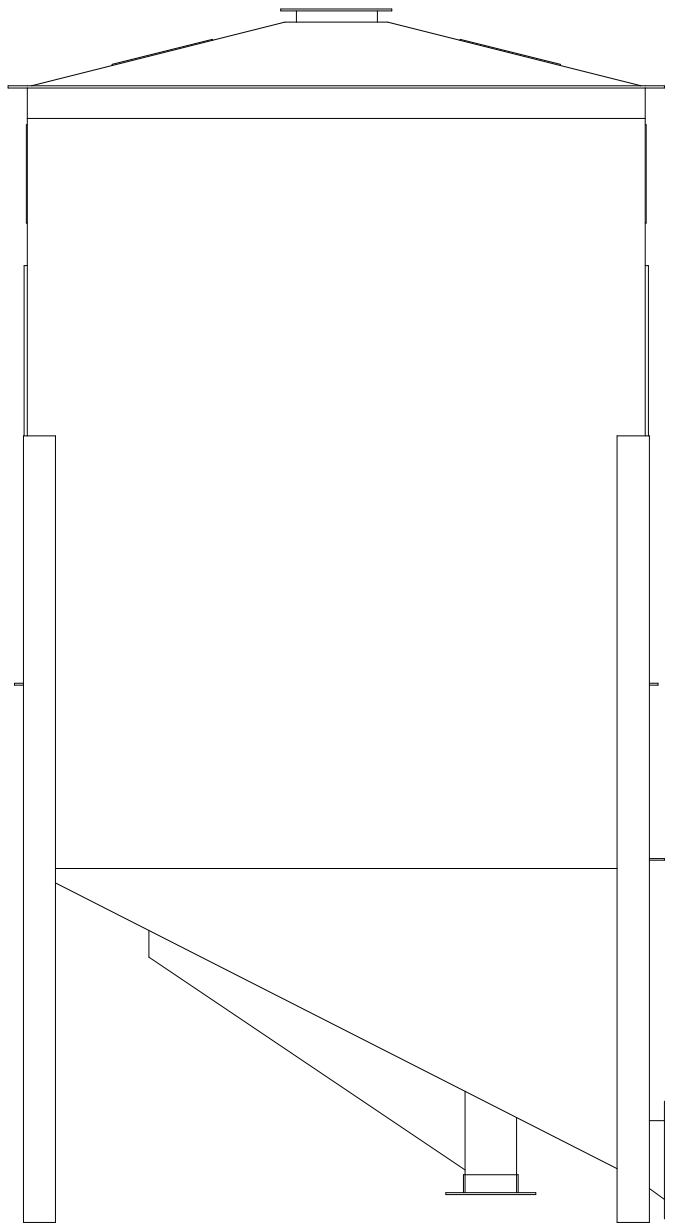
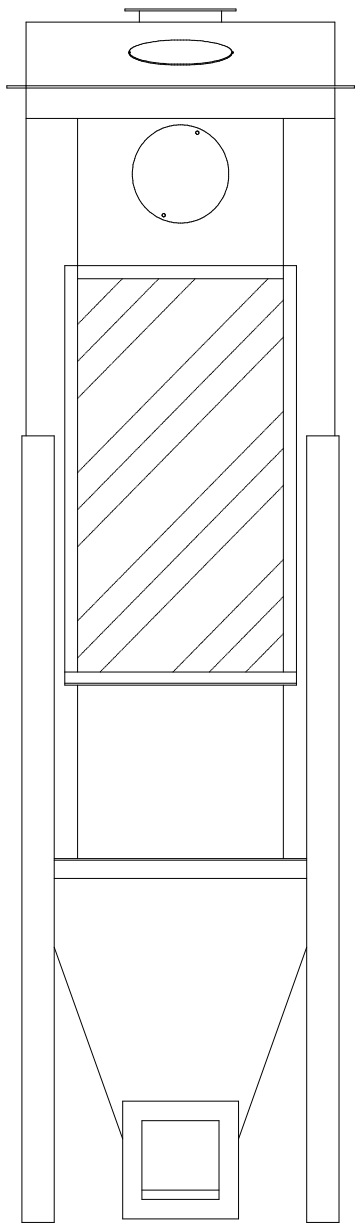
	Millimeters			
	L	B	S	T
A	152.4	152.4	38.1	38.1
B	177.8	101.6	38.1	38.1





SECTION J

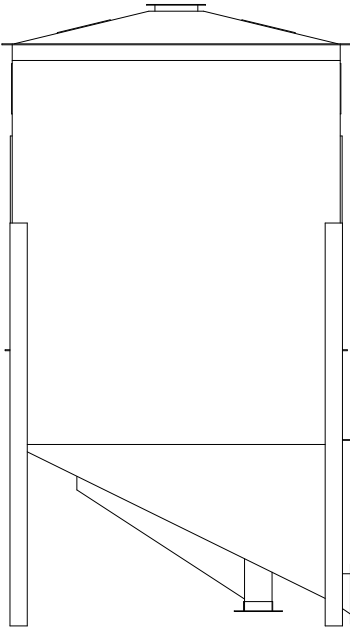
TWO (2) CORE ENCLOSED SPIRAL HT-100



HT-100

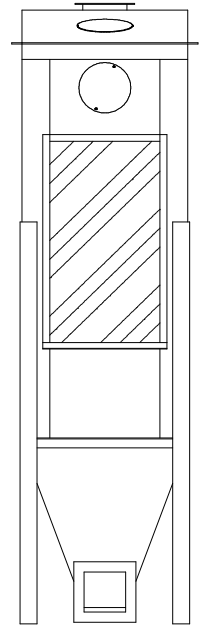


HT-100 Enclosed Spiral Separator



Completely Enclosed For

- ◆ **Dust Control**
- ◆ **Quiet Operation**
- ◆ **Compactness**
- ◆ **Ease of Handling**



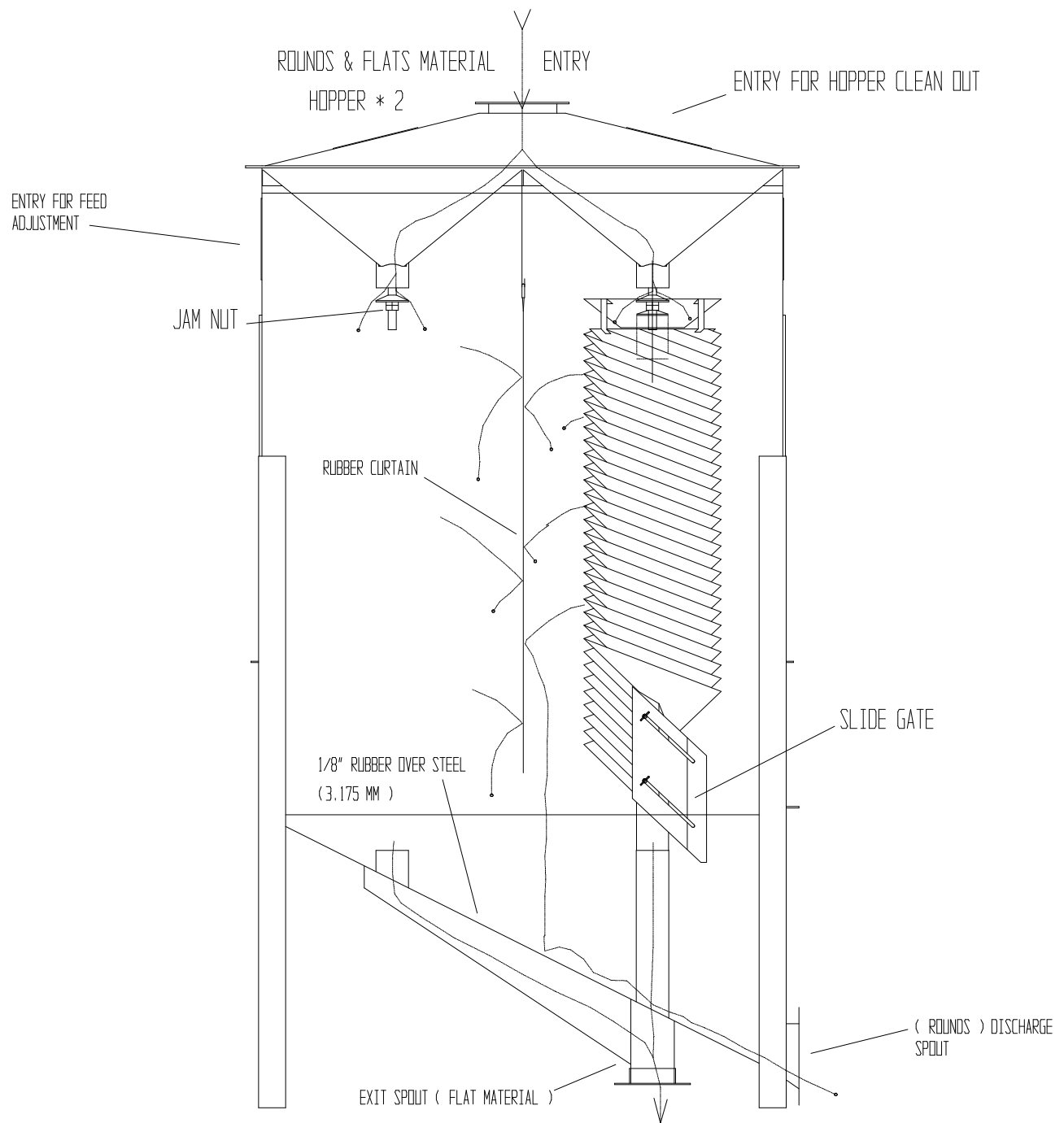
HT-100

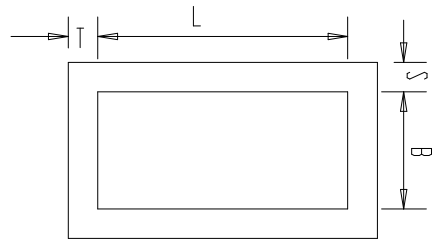
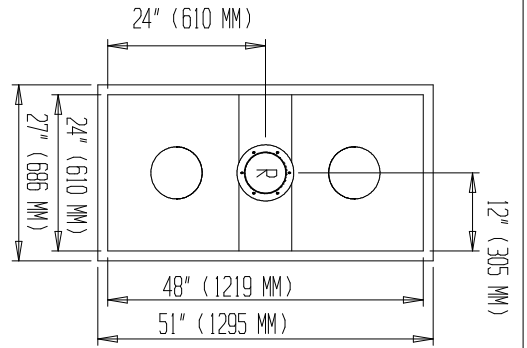
⇒ **High Capacity 100 BPH**

- ◆ Each unit contains (2) independent soldered, galvanized Spiral Core Cartridges with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ◆ Integral self-cleaning hoppers
- ◆ Deflectors included for fine tuning separation
- ◆ Two (2) access doors for easy entrance to internal components
- ◆ Heavy 14 gauge body construction with rubber cushioned seed discharge points
- ◆ Legs 3/16" Flanges 1/8"
- ◆ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 24 gauge Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

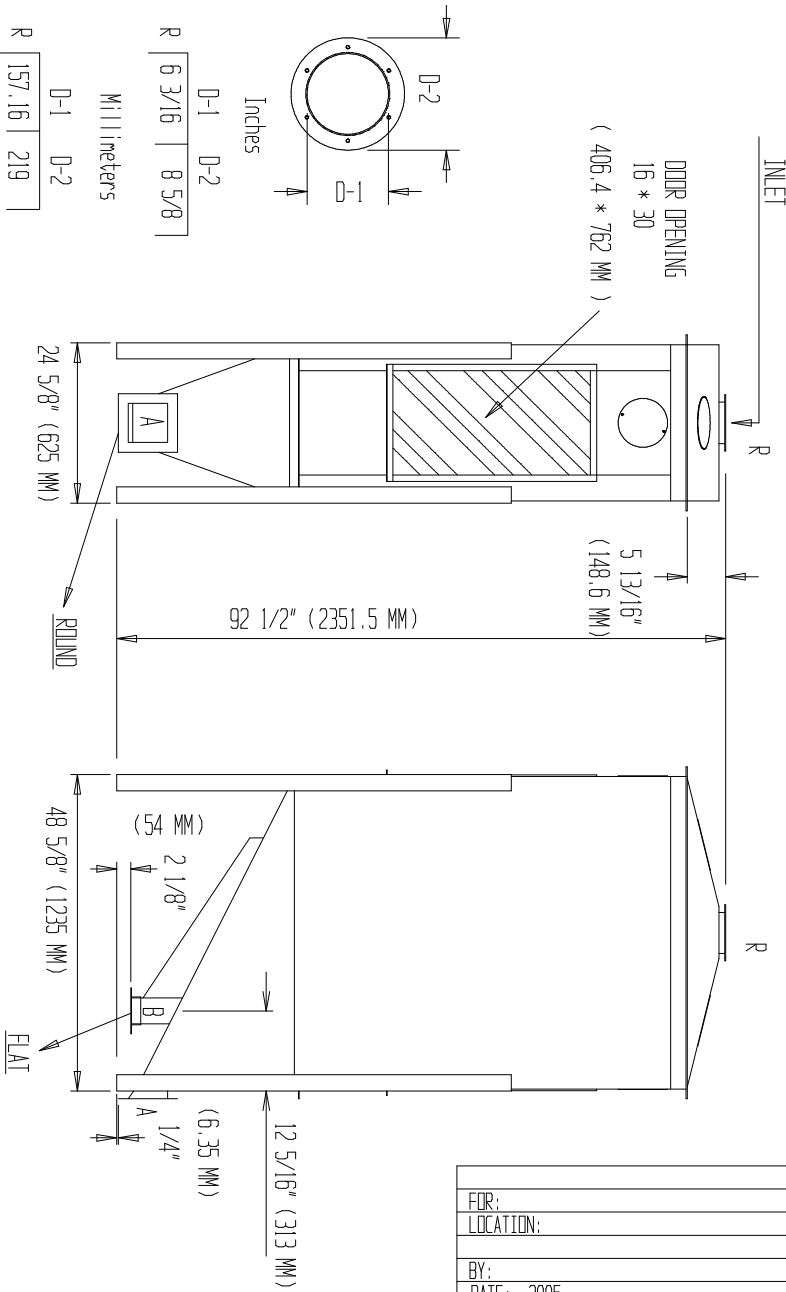
BASIC HT-100 BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)





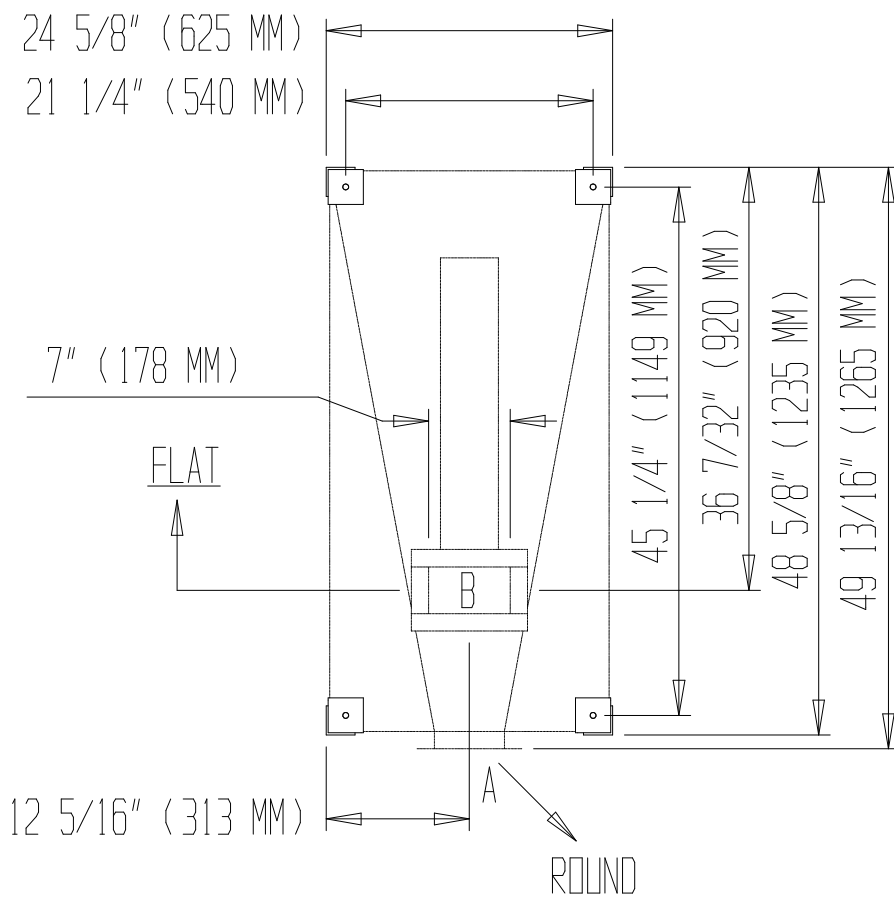
Inches				
A	L	B	S	T
7	6	6	1 1/2	1 1/2

Millimeters				
A	L	B	S	T
177.8	152.4	152.4	38.1	38.1



FOR:	
LOCATION:	
BY:	
DATE:	2005

DATE: 2005	<i>2 CORE ENCLOSED SPIRAL</i>	Type	
Issued by		STANDARD	
page		HT-100	
		Replaces:	NO.
			9 - A



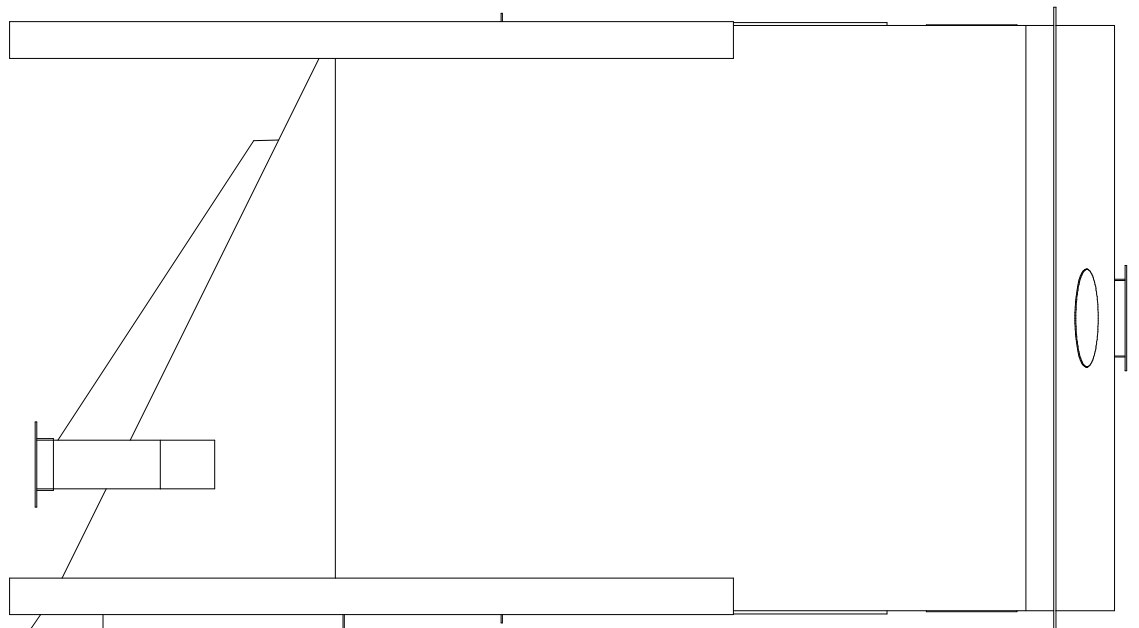
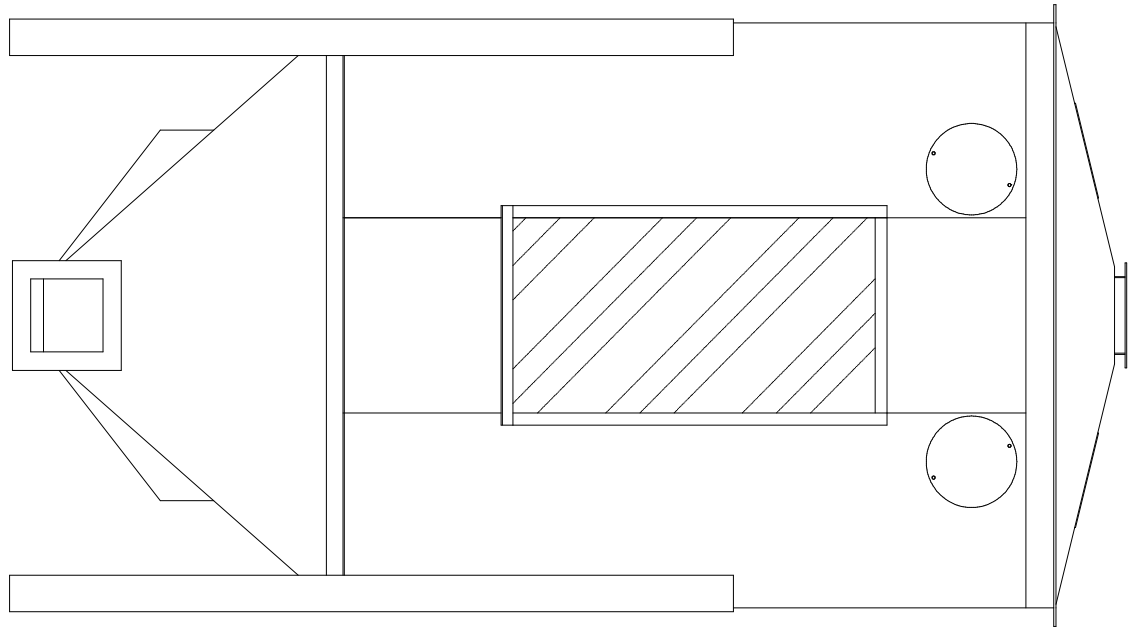
TOP - FRONT - SIDE (9 - A)

			<i>HT-100</i>	LOW PROFILE
				9 - B
			2 CORE ENCLOSED SPIRAL	
			FOOT PRINT DRAWING	DATE: 2005

SECTION K

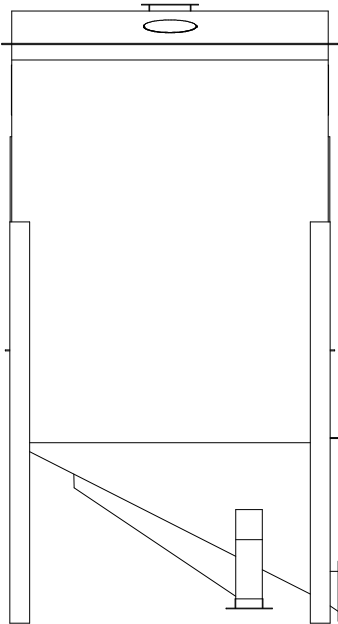
FOUR (4) CORE ENCLOSED SPIRAL HT-200

HT-200



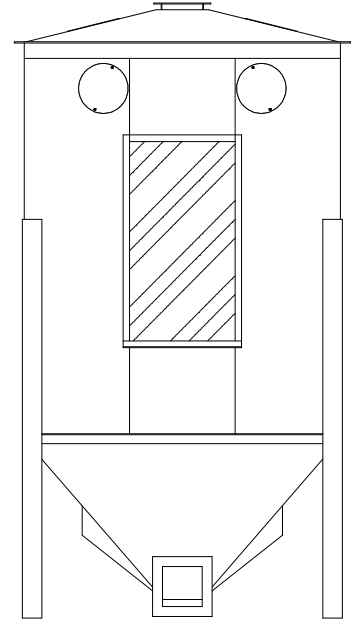


HT-200 Enclosed Spiral Separator



Completely Enclosed For

- ◆ **Dust Control**
- ◆ **Quiet Operation**
- ◆ **Compactness**
- ◆ **Ease of Handling**



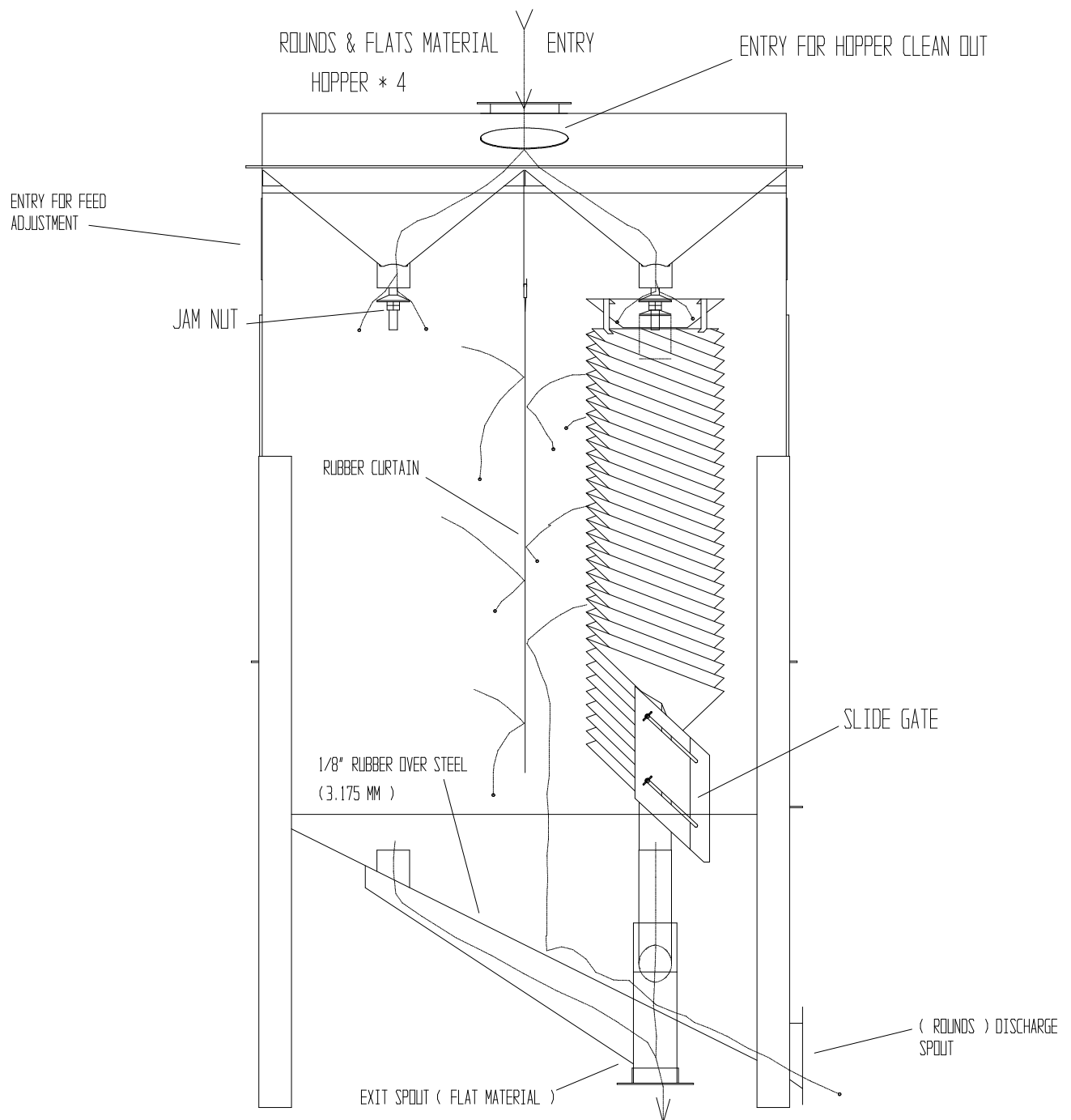
HT-200

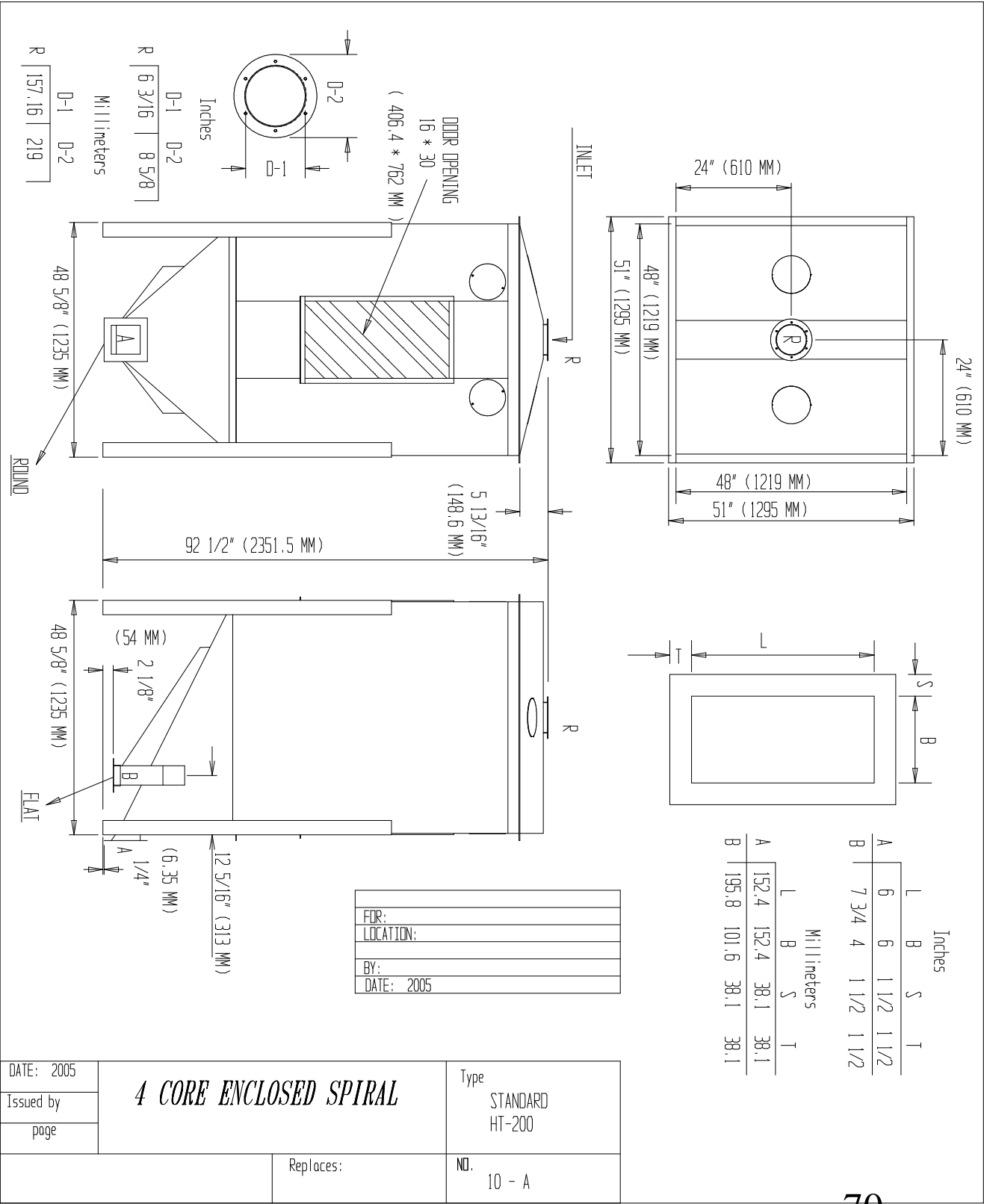
⇒ **High Capacity 200 BPH**

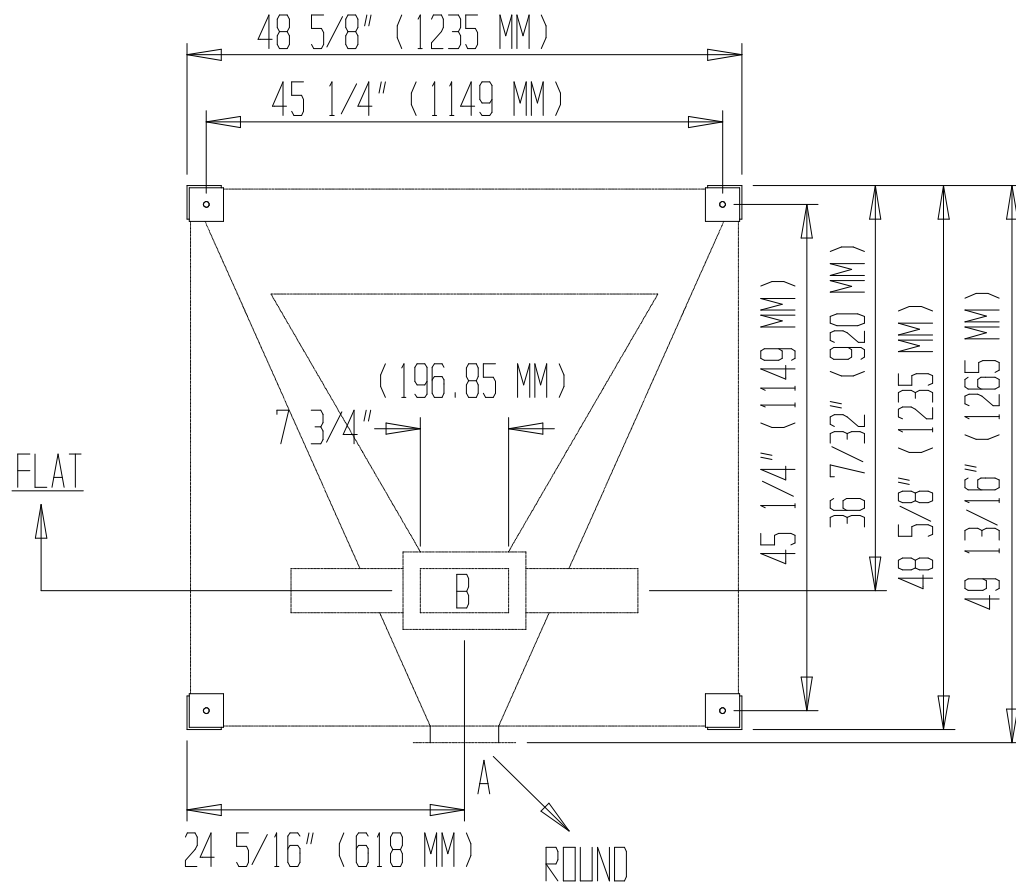
- ◆ Each unit contains (4) independent soldered, galvanized Spiral Core Cartridges with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ◆ Integral self-cleaning hoppers
- ◆ Deflectors included for fine tuning separation
- ◆ Two (2) access doors for easy entrance to internal components
- ◆ Heavy 14 gauge body construction with rubber cushioned seed discharge points
- ◆ Legs 3/16" Flanges 1/8"
- ◆ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 24 gauge Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

BASIC HT-200 BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)





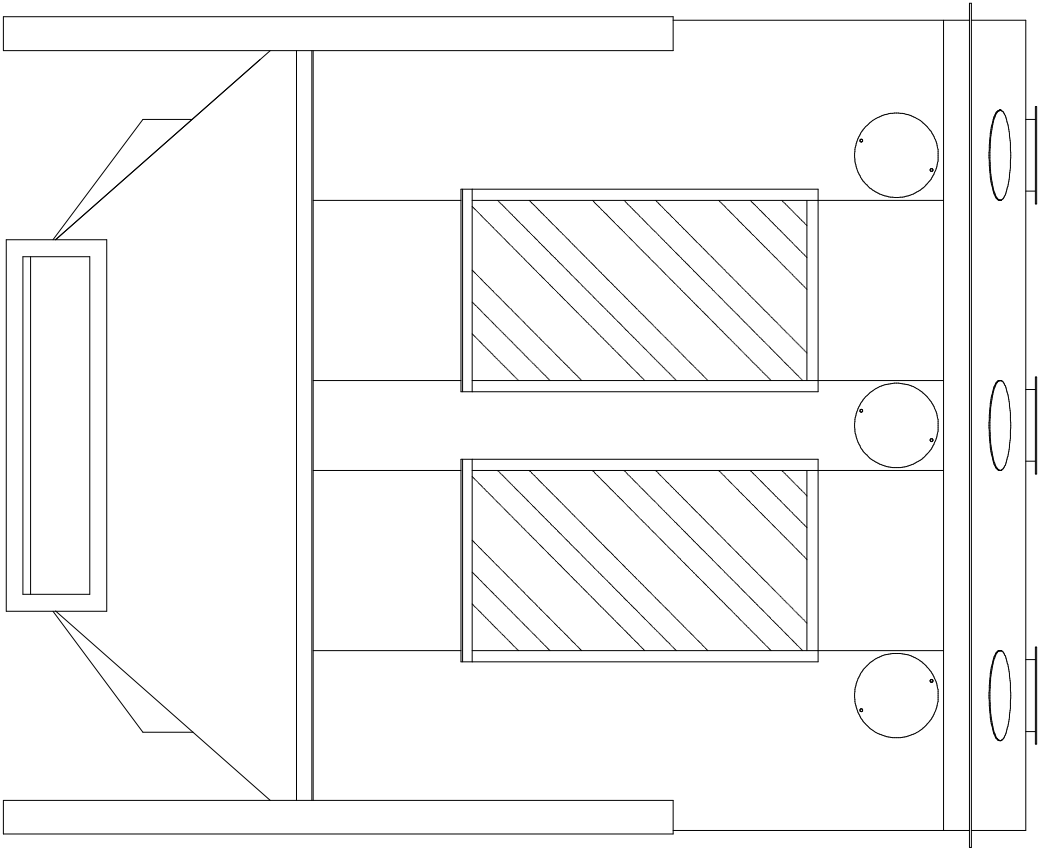


TOP - FRONT - SIDE (10 - A)

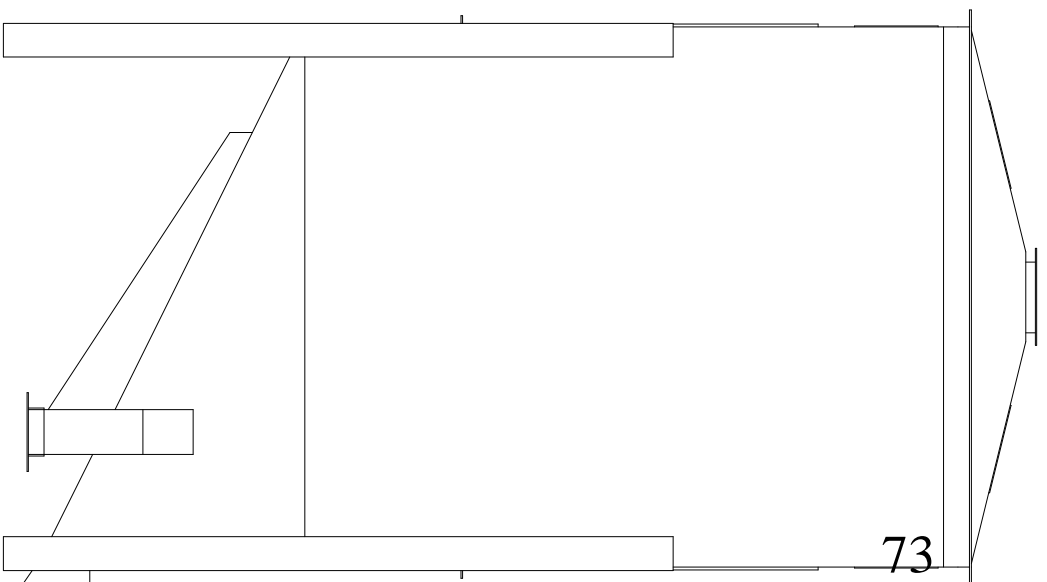
			<p><i>HT-200</i></p> <p><i>4 CORE ENCLOSED SPIRAL</i></p> <p>FOOT PRINT DRAWING</p>	LOW PROFILE
				10 - B
				DATE: 2005

SECTION L

SIX (6) CORE
ENCLOSED SPIRAL
HT-300



HT-300

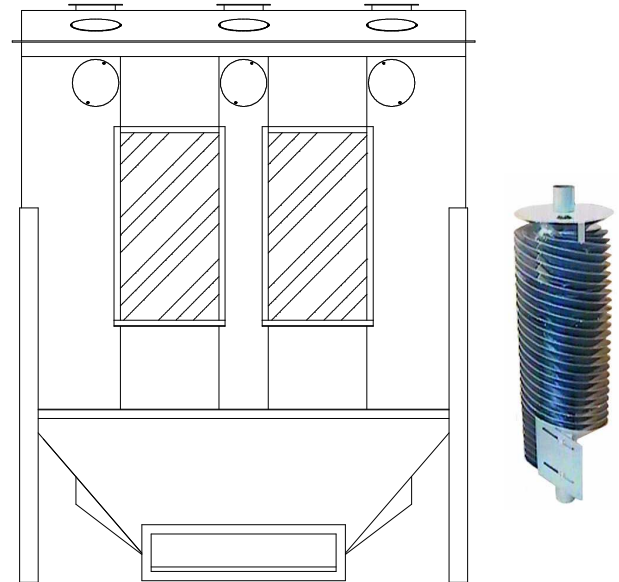




HT-300 Enclosed Spiral Separator

Completely Enclosed For

- **Dust Control**
- **Quiet Operation**
- **Compactness**
- **Ease of Handling**



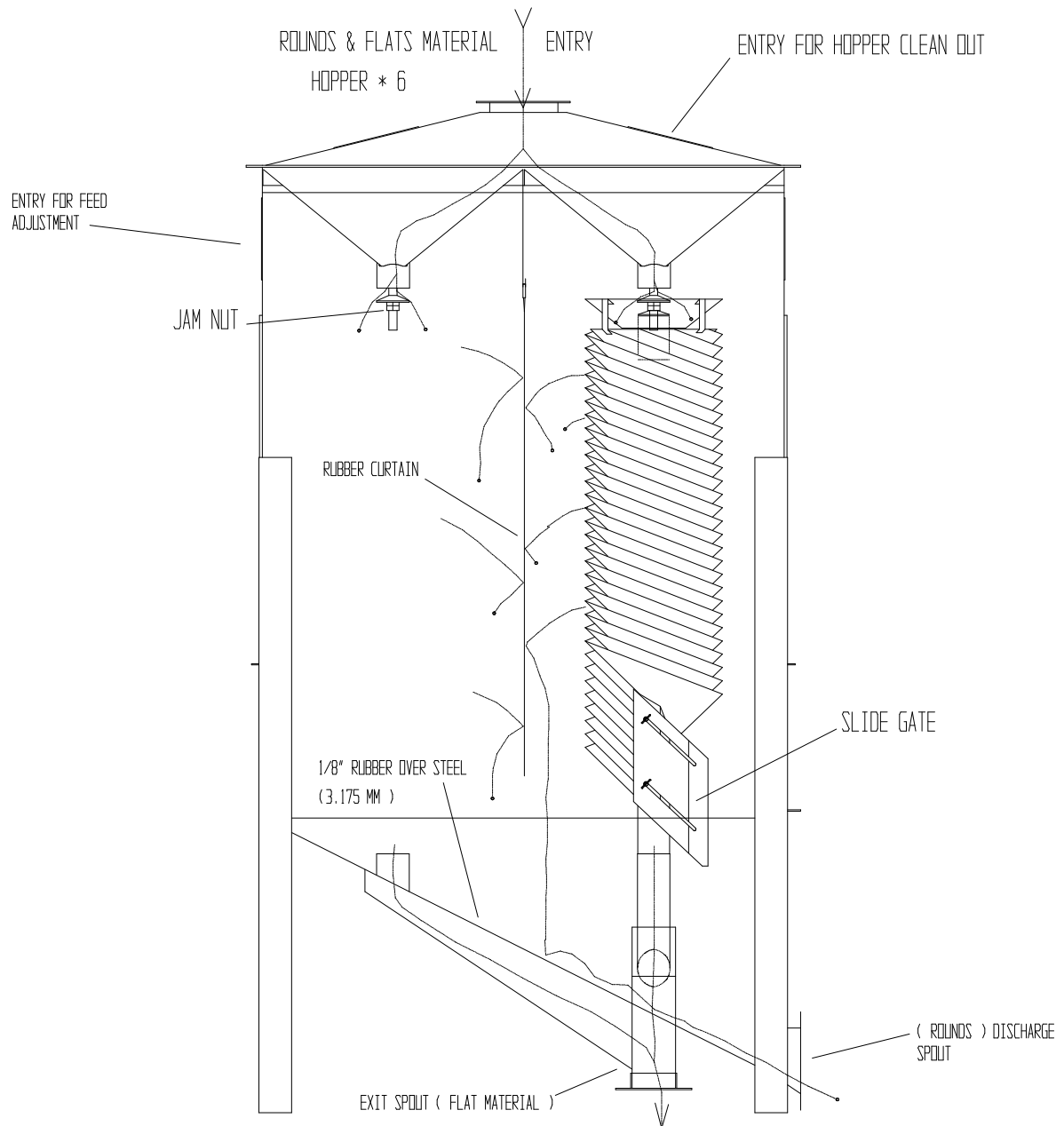
HT-300

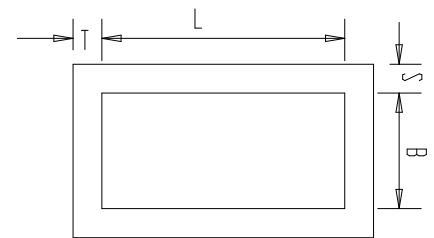
⇒ **High Capacity 300 BPH**

- ♦ Each unit contains (6) independent soldered, galvanized Spiral Core Cartridges with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ♦ Integral self-cleaning hoppers
- ♦ Deflectors included for fine tuning separation
- ♦ Four (4) access doors for easy entrance to internal components
- ♦ Heavy 14 gauge body construction with rubber cushioned seed discharge points
- ♦ Legs 3/16" Flanges 1/8"
- ♦ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 24 guage Stainless)

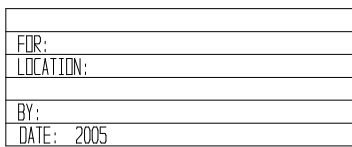
⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

BASIC HT-300 BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)



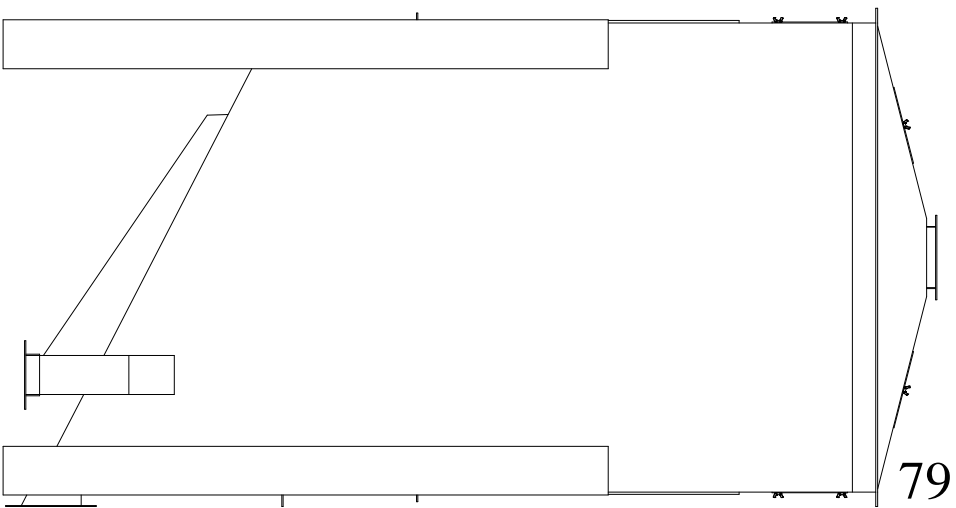
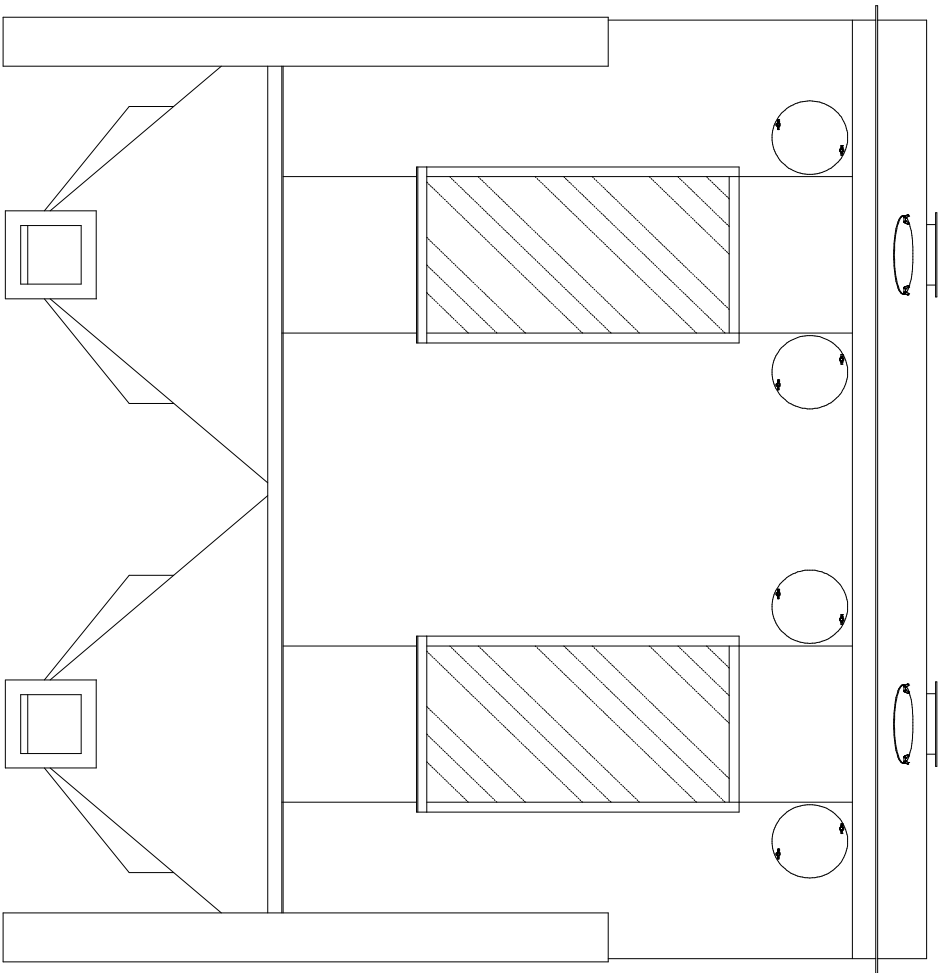


	Millimeters			
	L	B	S	T
A	762	152.4	38.1	38.1
B	806.4	101.6	38.1	38.1

76

SECTION M

EIGHT (8) CORE ENCLOSED SPIRAL HT-400



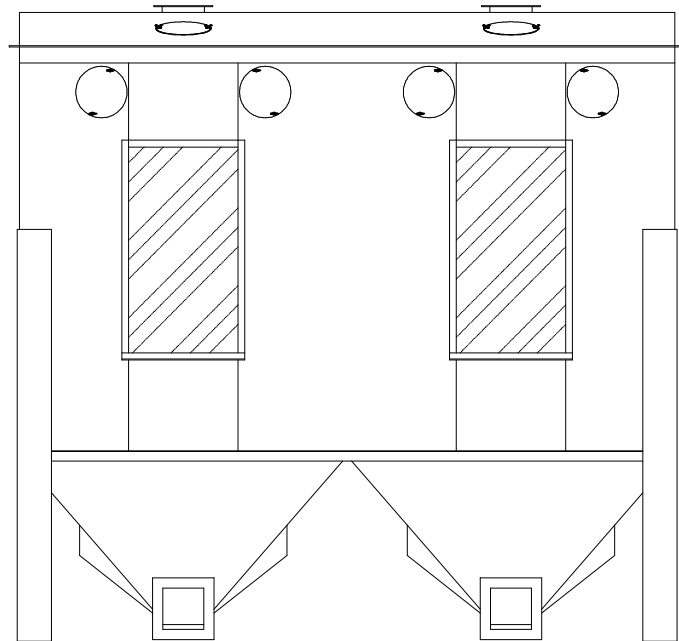
HT-400 Low Profile - Double Bottom



HT-400 Enclosed Spiral Separator

Completely Enclosed For

- ♦ **Dust Control**
- ♦ **Quiet Operation**
- ♦ **Compactness**
- ♦ **Ease of Handling**



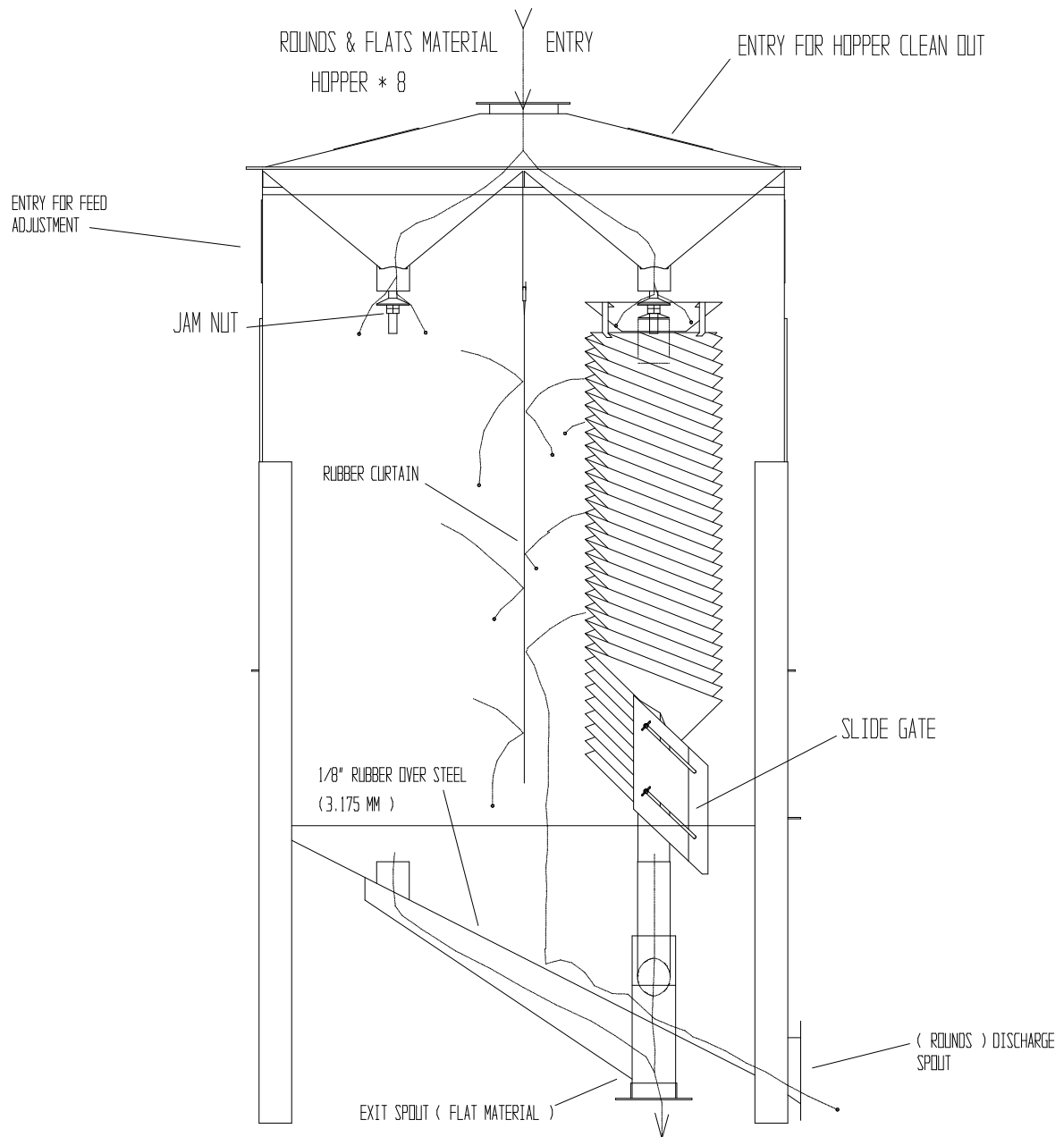
HT-400

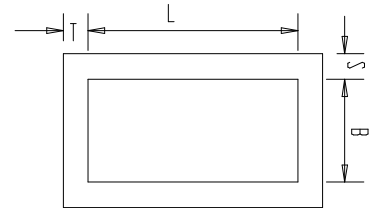
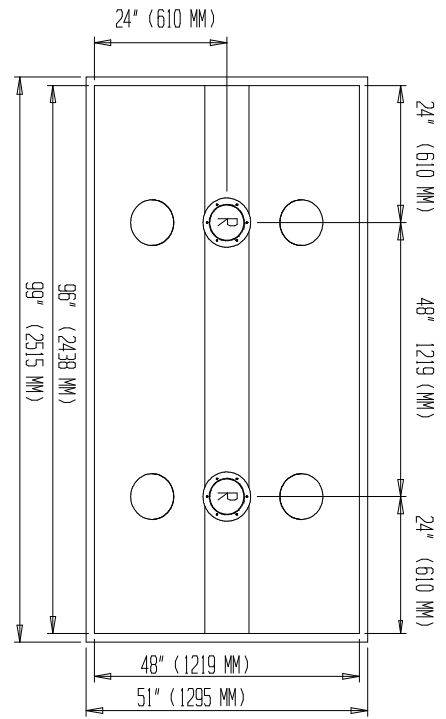
⇒ **High Capacity 400 BPH**

- ♦ Each unit contains (8) independent soldered, galvanized Spiral Core Cartridges with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ♦ Integral self-cleaning hoppers
- ♦ Deflectors included for fine tuning separation
- ♦ Four (4) access doors for easy entrance to internal components
- ♦ Heavy 14 gauge body construction with rubber cushioned seed discharge points
- ♦ Legs 3/16" Flanges 1/8"
- ♦ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 24 guage Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

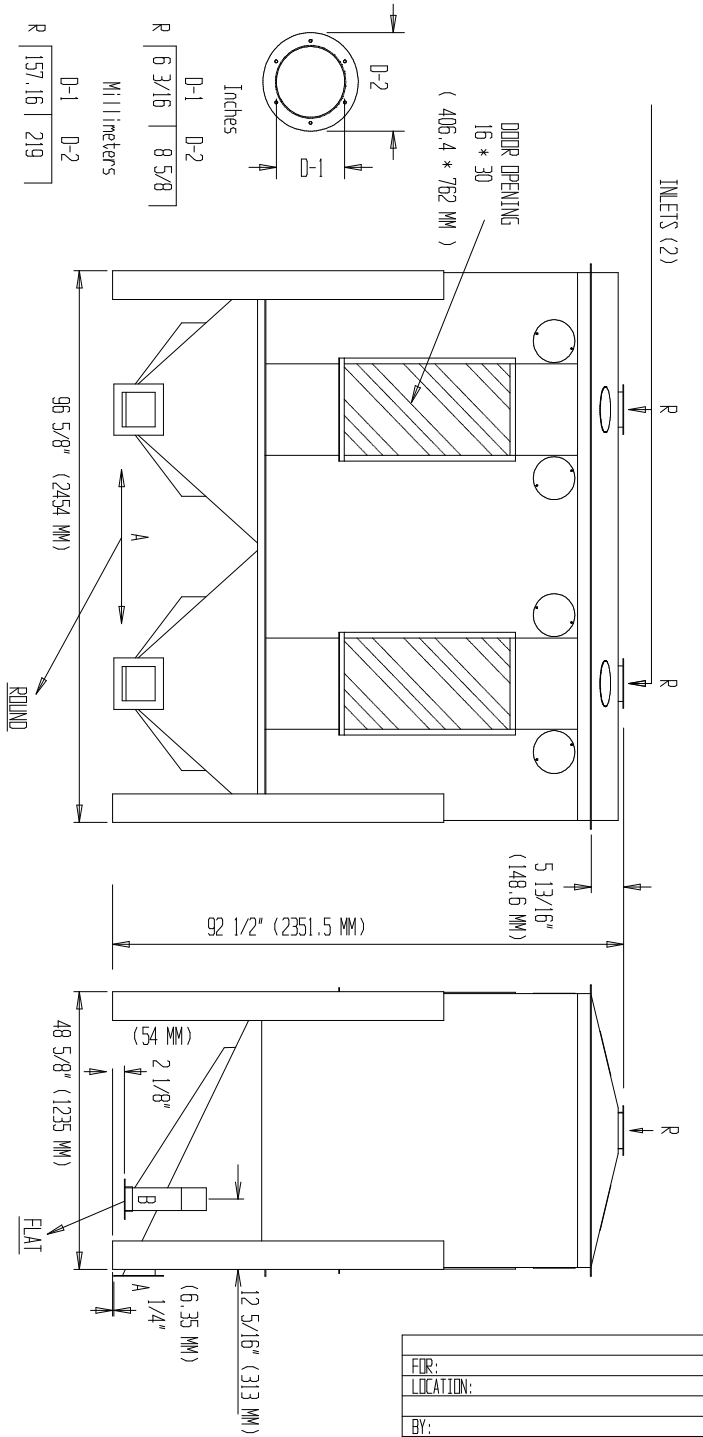
BASIC HT-400 BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)



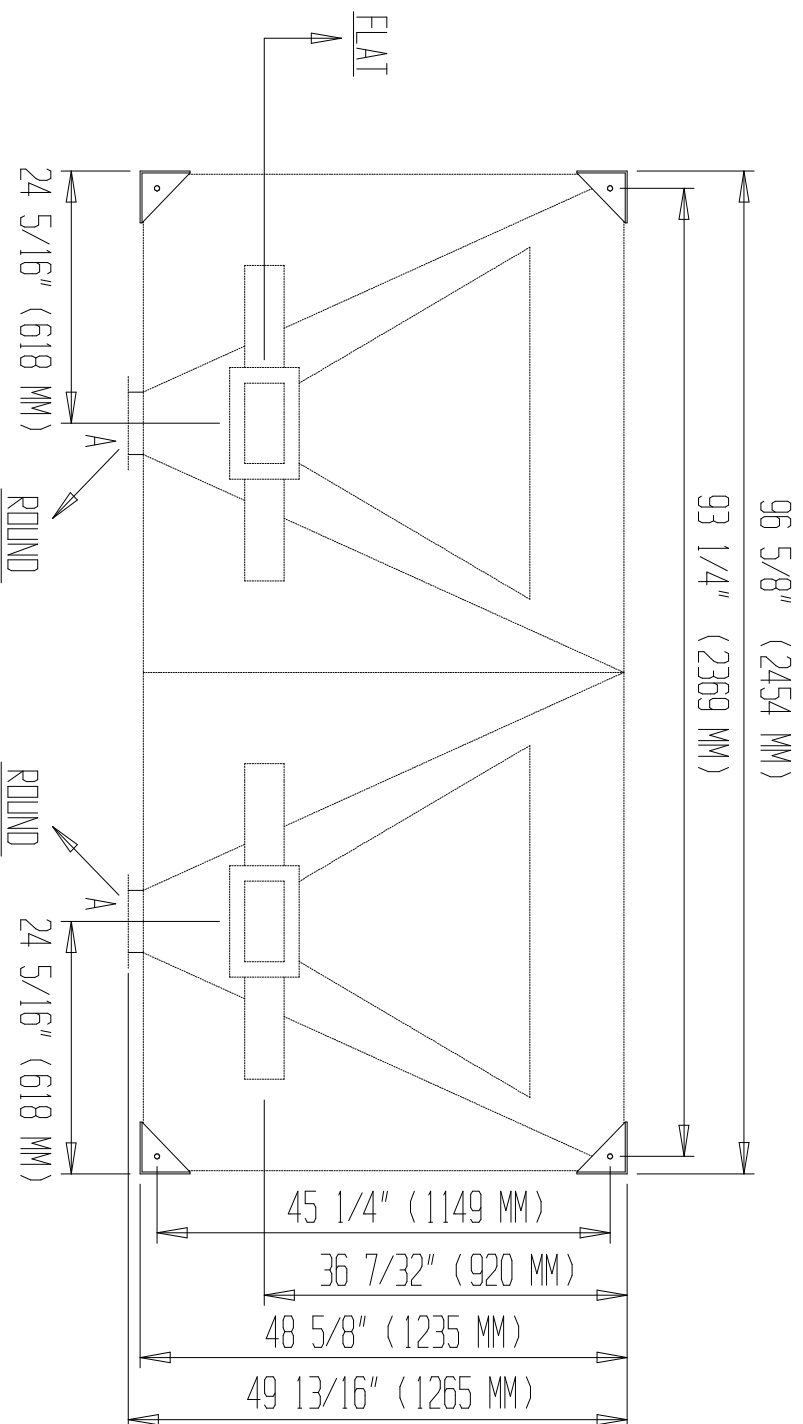


Inches				
A	L	B	S	T
6	6	1 1/2	1 1/2	
B	7 3/4	4	1 1/2	1 1/2

Millimeters				
A	L	B	S	T
152.4	152.4	38.1	38.1	
B	195.8	101.6	38.1	38.1



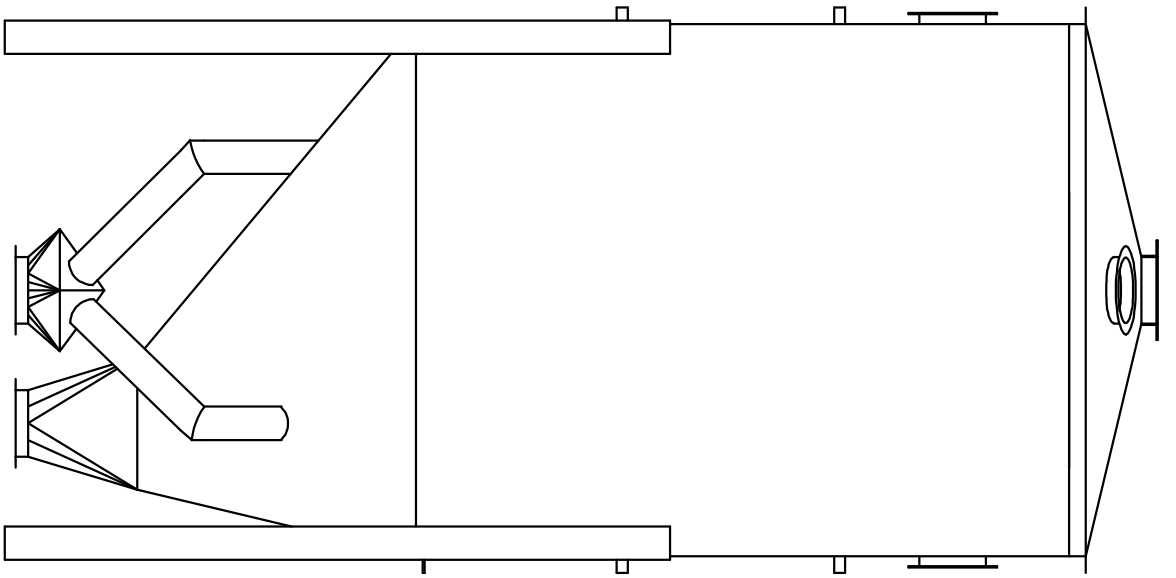
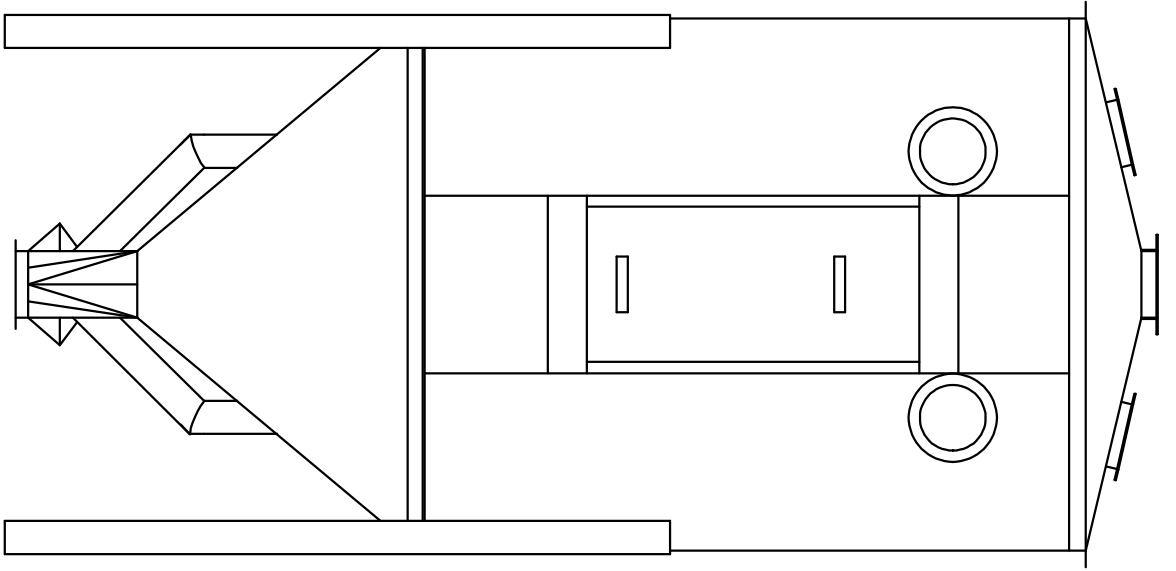
DATE: 2007	8 CORE ENCLOSED SPIRAL DOUBLE BOTTOM	Type: HT-400
Issued by		Replaces:
page		ND.

[illegible]

SECTION N

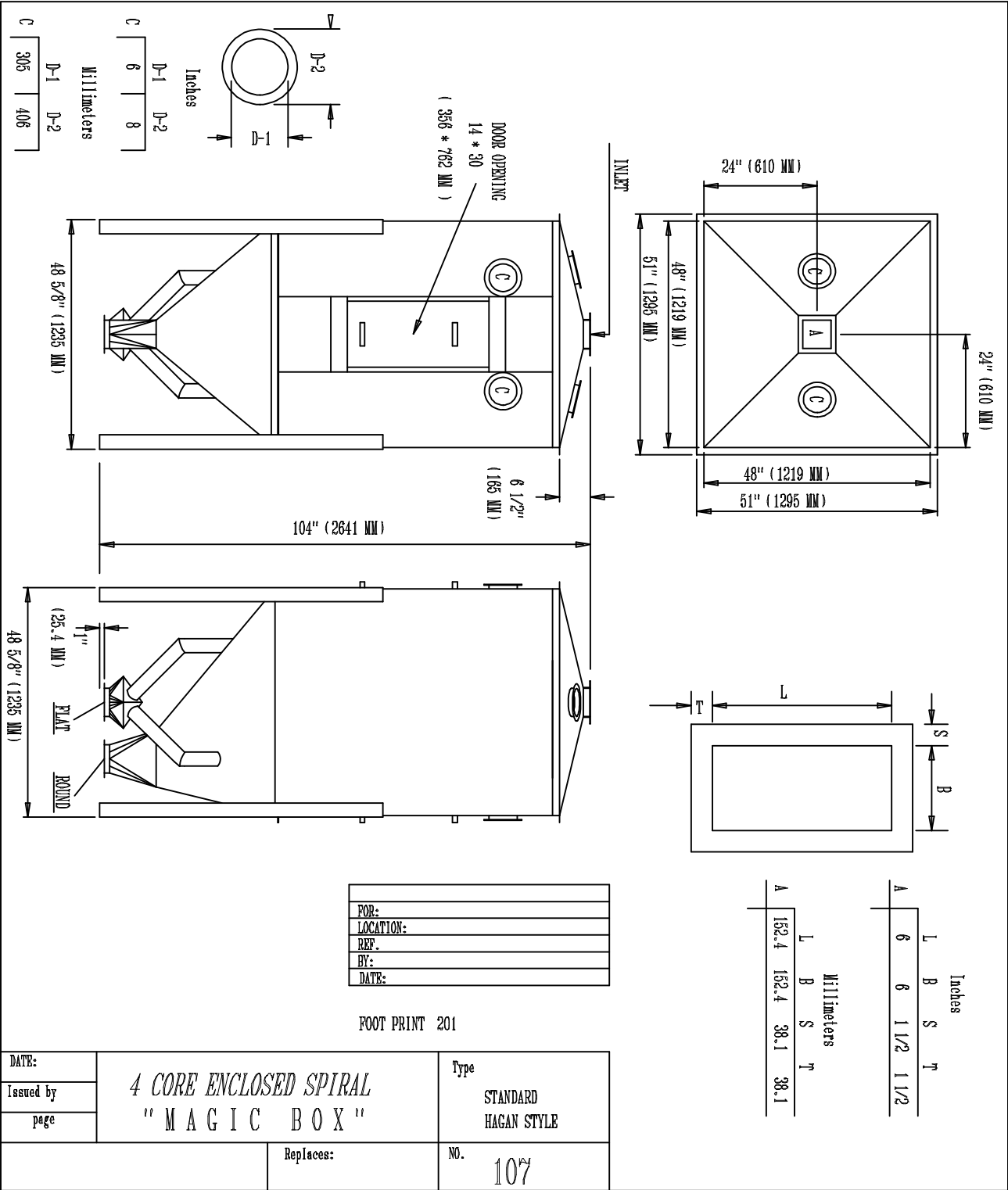
FOUR (4) CORE ENCLOSED SPIRAL

HAGAN “MAGIC BOX”



Hagen "Magic Box"

HAGAN
PICTURE
GOES
HERE





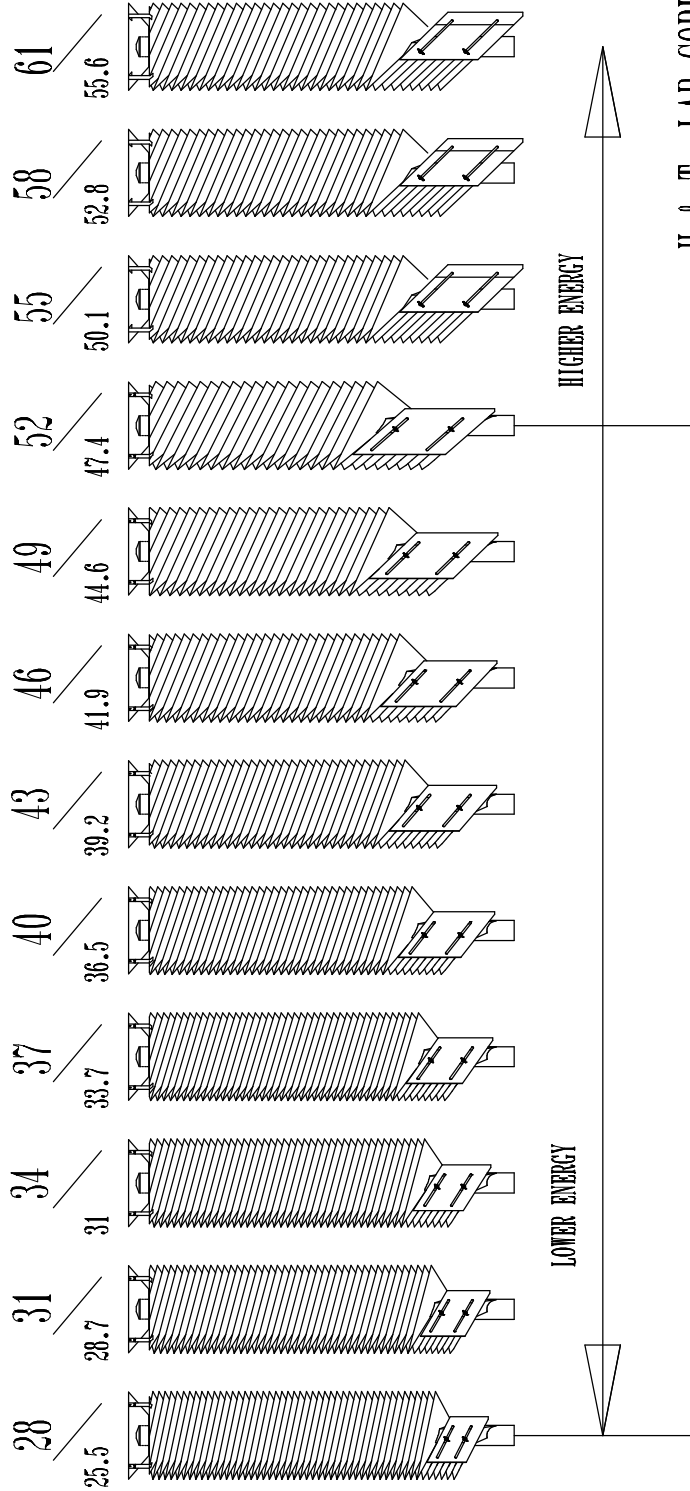
SECTION N

HT-8FC

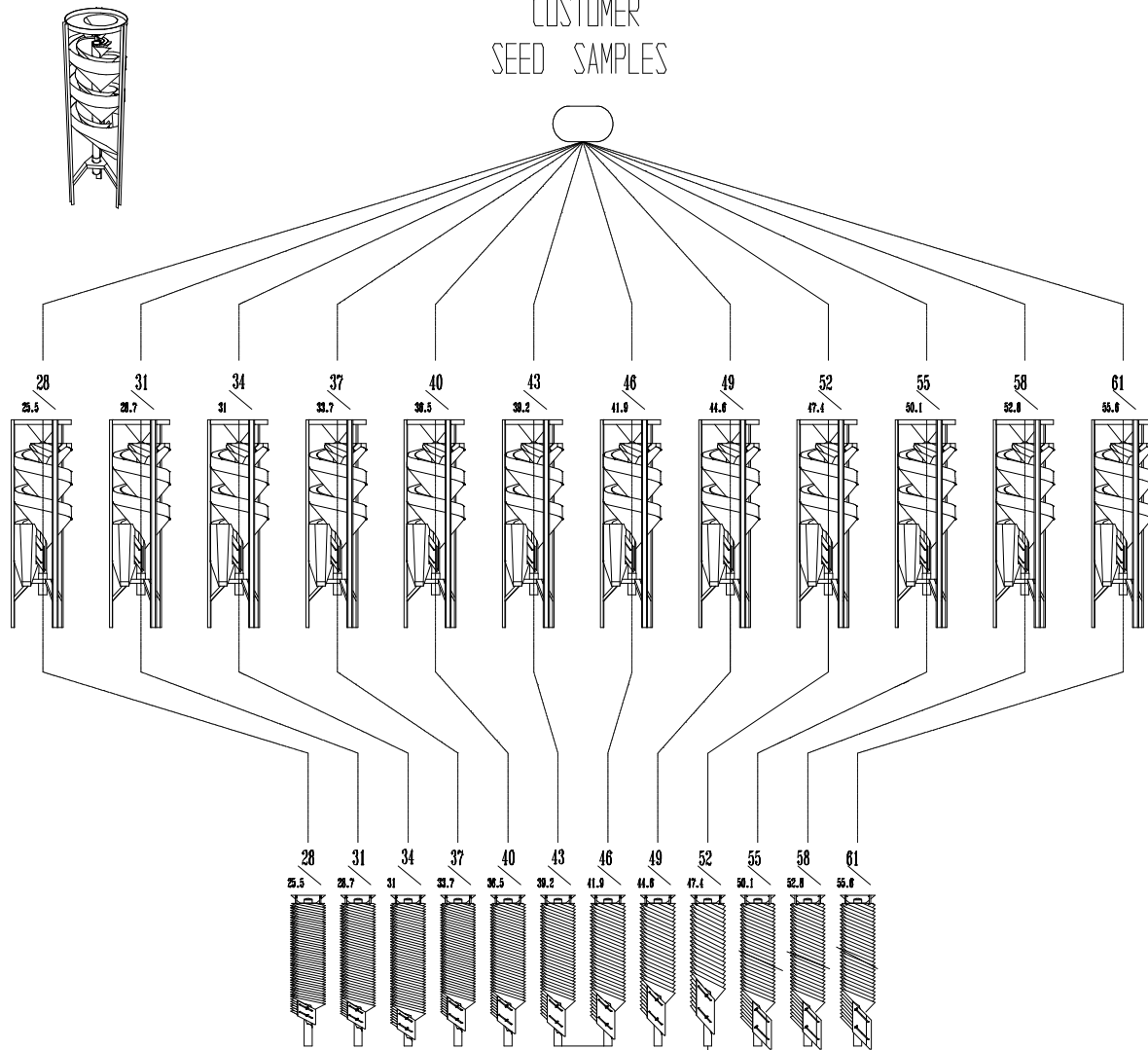
EIGHT (8) FLIGHT CORE

PROFILES OF STANDARDIZED ENCLOSED SPIRAL CORES

TOP Numbers = Downward Angles around the STEM Pipe 
 BANKING ANGLES = BOTTOM Numbers - CENTER

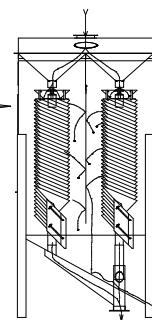


CUSTOMER SEED SAMPLES



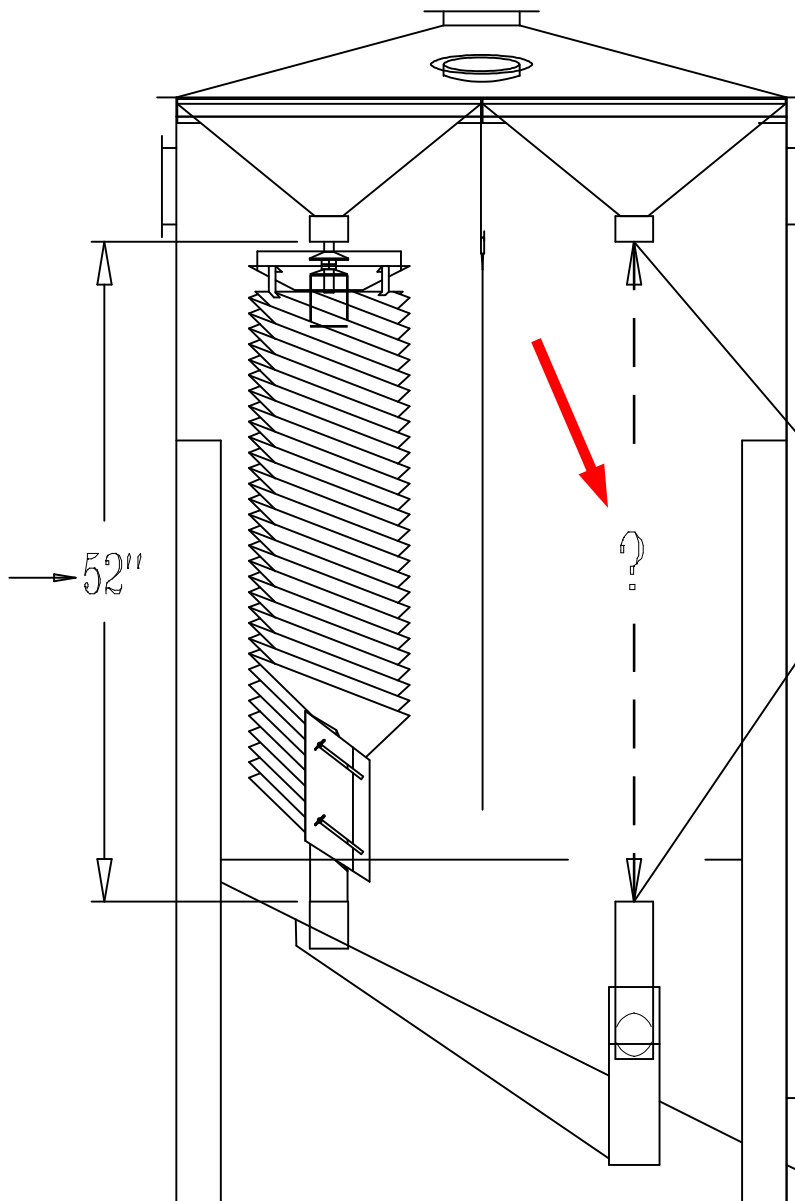
H & T LAB CORES

TOP Numbers = Downward Angles around the STEM Pipe
BANKING ANGLES = BOTTOM Numbers - CENTER



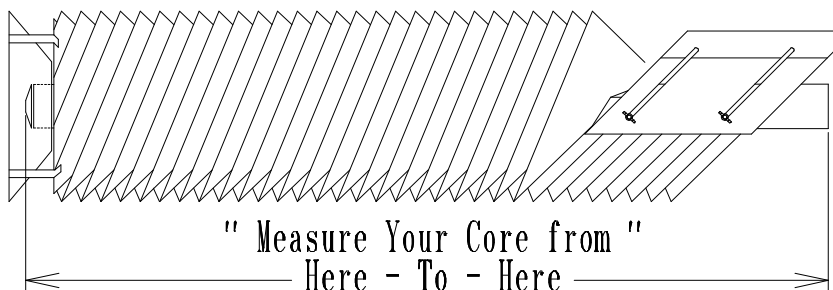
Information H & T needs to retrofit cores into Different Kinds of Spiral Cabinets

Stud Pipe to Stud Pipe Length for ... H & T (LP) Cabinets = 52"

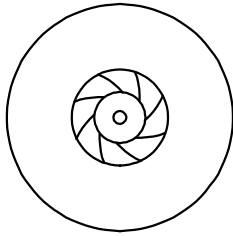


- 1 - Need this Distance
from ... Bottom of Hopper Stub Pipe
To Top of Floor Stub Pipe
- 2 - Also the ... Outside Diameter of
each Stub Pipe (Top & Bottom)

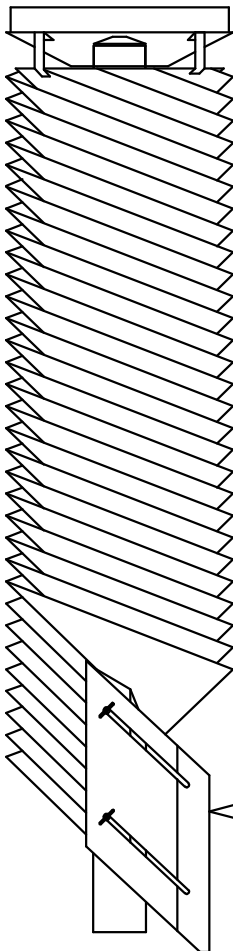
Important - You can use a Small Tape Measurer
to go all the way thru the core



HT-8FC



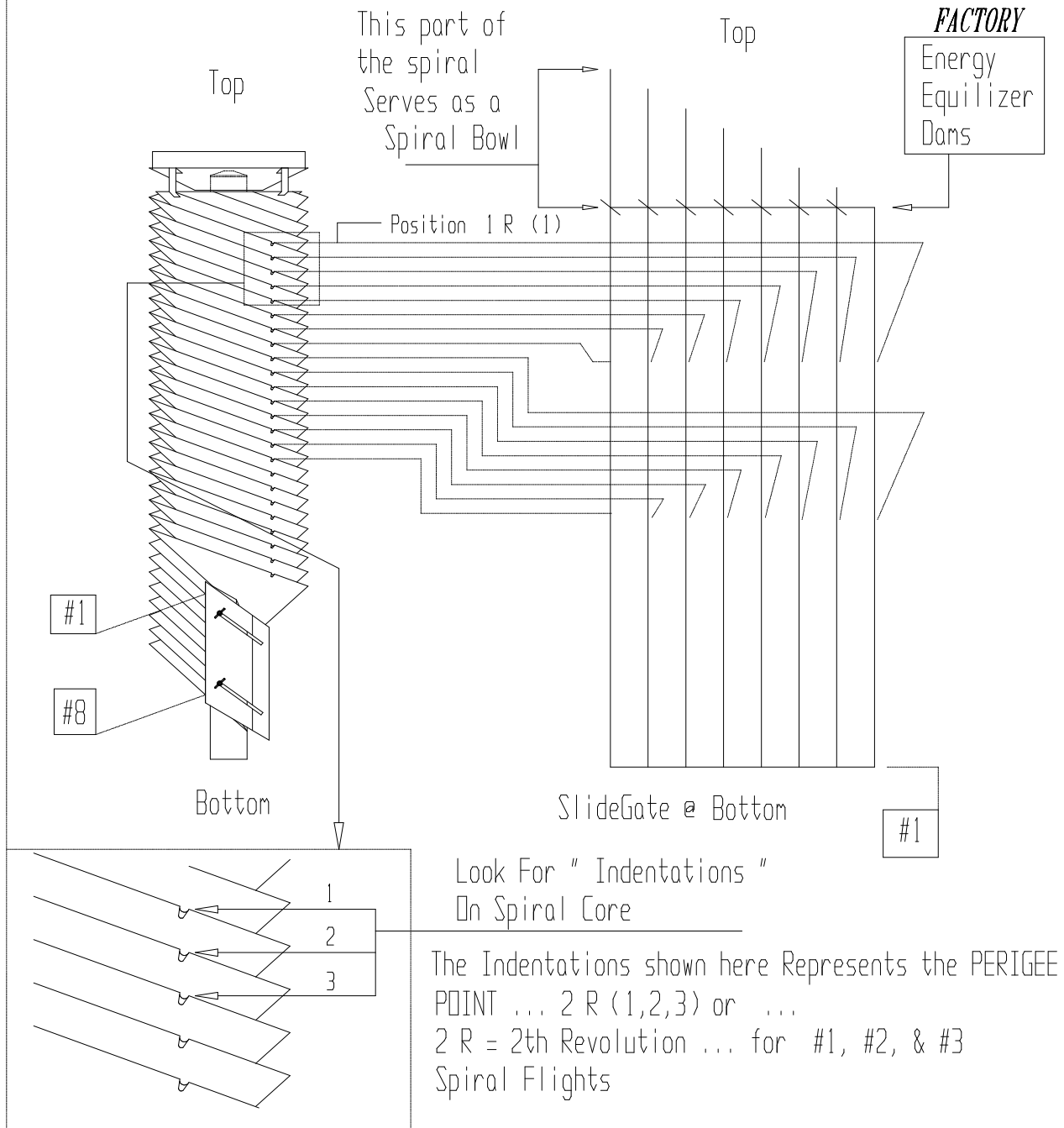
Eight (8) Flight Core



Flights are Energy Equalized so Fine Tuning Gate Will Work Properly !

*Adjustment GATE
for .. Fine Tuning*

Explanation of Energy Levels *Use as Guide for Placement of "MAGNETIC" Seed Dams*



" I N D E N T A T I O N S " ARE USED AS ... ENERGY REFERENCE POINTS

EXAMPLE OF

- - MAGNETIC SEED DAMS - -

4 ... inches long x 3/4 inches Wide



See Page - 154

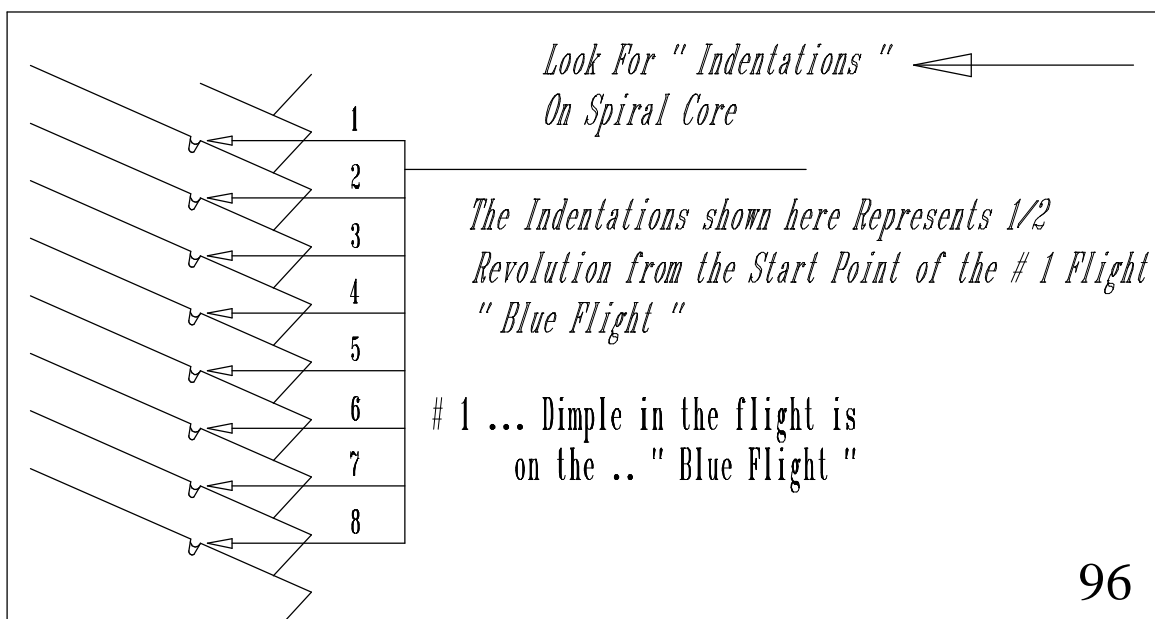
The following pages contains pictures to give operator instructions of where to ... Place your magnetic “Seed Dams”

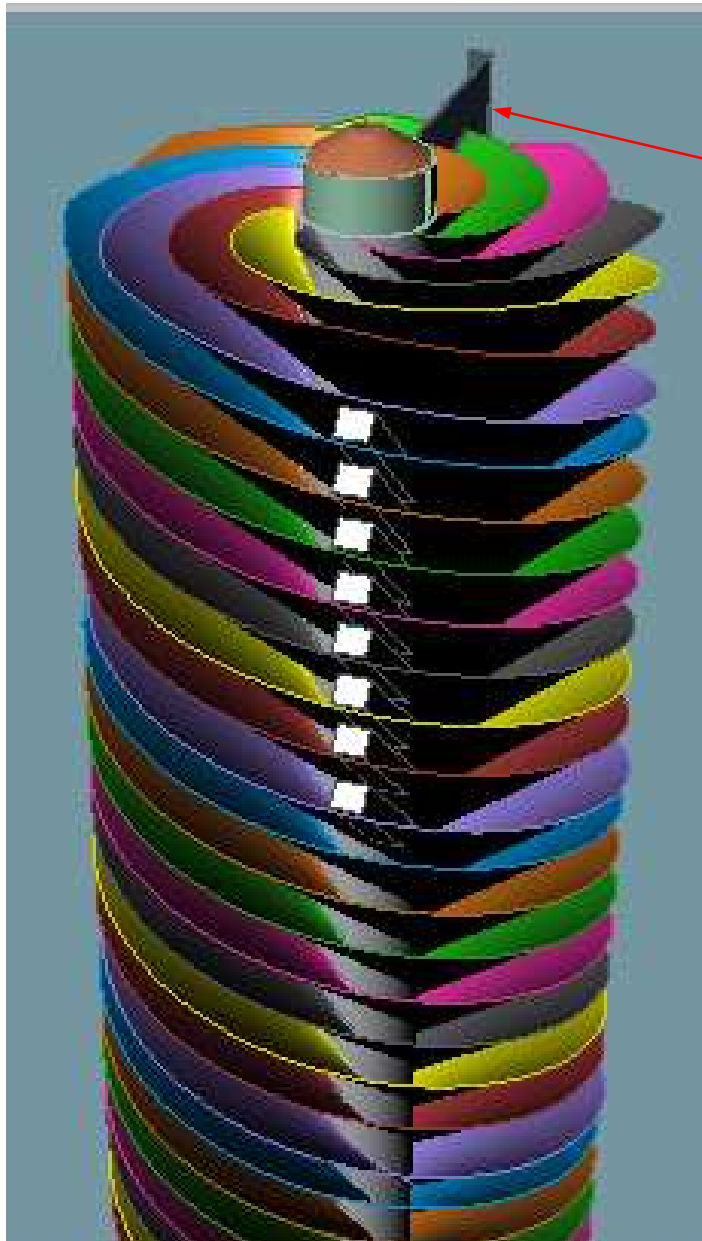
The first thing operator needs to do is locate the (8) “Indentations” that have been stamped into your - spiral flighting to make ... Placement of your dams easier

To get a better understanding of the purpose of seed dams
*page 136 - 146

Also ... the factory installed steel dams - page 94 (Equilizers)

See Picture Below



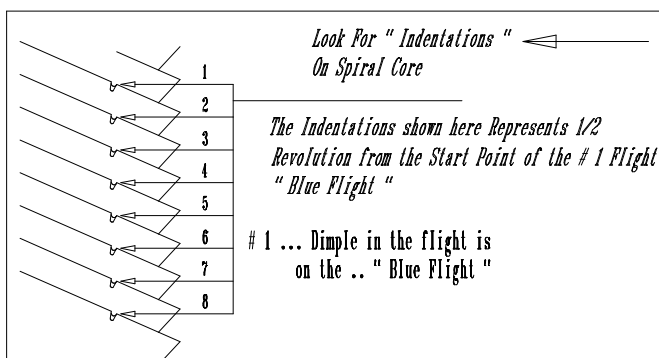


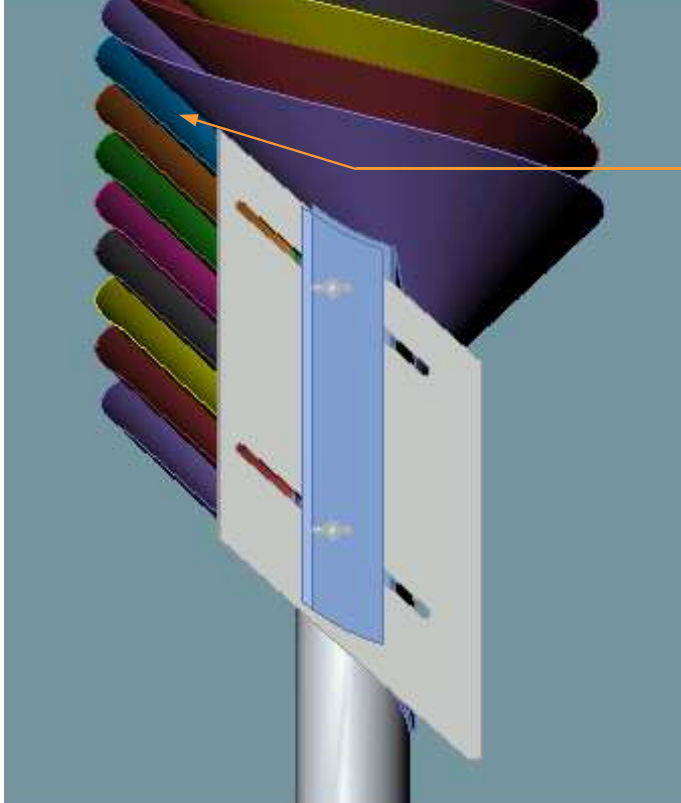
Factory
Installed
“EQUALIZER”

(8) Magnetic
Seed Blockers
should go **approx**
180 degs around &
down from Equalizer

Notice ... 1st dam
is placed on the
Blue .. # 1 Flight

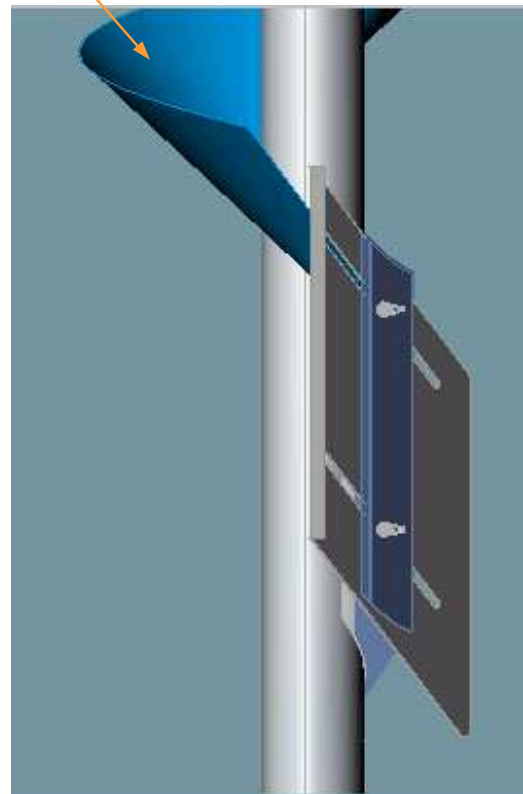
Other 7 dams go
directly underneath
vertically on
2,3,4,5,6,7,8 flights

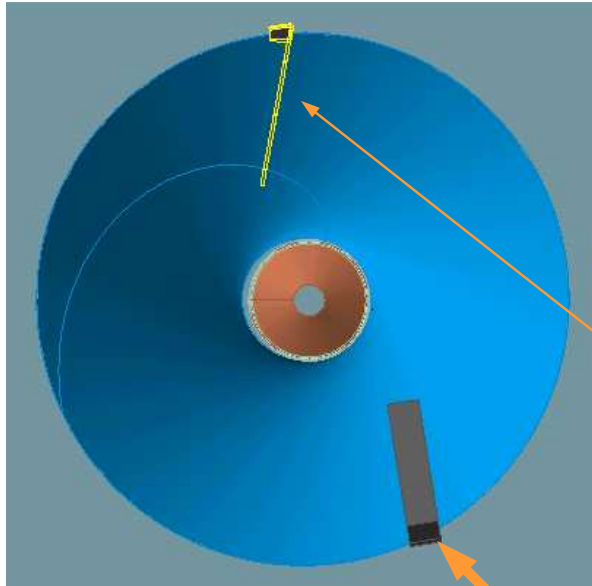




1 Flight
is the “ Blue “
flighting
located at top
of the .. Gate

This picture shows
1 .. Blue flighting
only
and its location
at top of the
Gate !

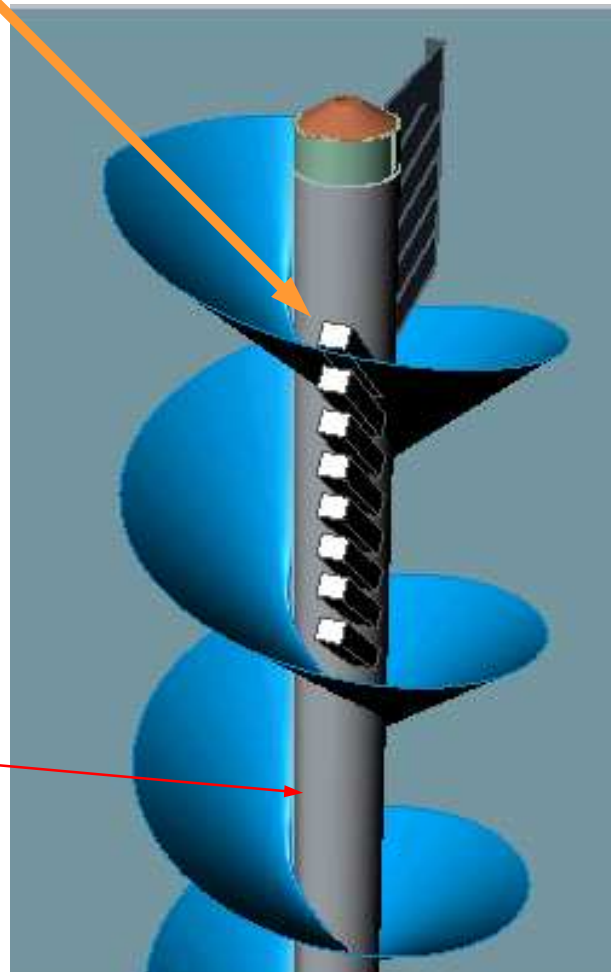




Top down view of the # 1
 “ Blue Flight “ and the
 placement of the 1st
 Magnetic seed dam in
 relation to the
 “ Factory installed “
 — Equalizer —
*Approx 180 degs
 around & down*

The other
 - 7 dams -
 are placed
 vertically
 down from this
 dam

If “More are needed”
 They will go
 directly ... Under
 these dams !



H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above, simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core lengths..If for instance a longer core is needed...Use price derived at above & divide by 49.75 - price per inch (A)..then Multiply extra inches needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFIT HEADS for above cores - \$ — — - each

CRATING PRICES: These Crates are for ... Domestic as well as
for Export \$ — — - (1) \$ — — - (2) \$ — — — (4) \$ — — — (6)
\$ — — — (8)

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS Stainless Steel/Galv - Standard Flighting

8 cores & up ^

(26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26/26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24/24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22/22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

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above & divide by 49.75 = price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFIT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS Stainless Steel - Standard Flighting

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core
lengths..If for instance a longer core is needed..Use price derived at
above & divide by 49.75 = price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFIT HEADS for above cores = \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

FOR CANOLA

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core
lengths..If for instance a longer core is needed...Use price derived at
above & divide by 49.75 - price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Galvanized Metal - 8 Inch Flighting

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core
lengths..If for instance a longer core is needed...Use price derived at
above & divide by 49.75 - price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Stainless Steel/Galv - 8 Inch Flighting

8 cores & up ^

(~~26~~/28 ga.- \$ — — —) (~~24~~/28 ga.- \$ — — —)

(~~26~~/26 ga.- \$ — — —) (~~24~~/26 ga.- \$ — — —) (~~22~~/26 ga.- \$ — — —)

(~~24~~/24 ga.- \$ — — —) (~~22~~/24 ga.- \$ — — —)

(~~22~~/22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above, simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core lengths..If for instance a longer core is needed...Use price derived at above & divide by 49.75 - price per inch (A)..then Multiply extra inches needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Stainless Steel - 8 Inch Flighting

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — — -)

(24 ga.- \$ — — — -) (22/24 ga.- \$ — — — -)

(22 ga.- \$ — — — -)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core
lengths..If for instance a longer core is needed...Use price derived at
above & divide by 49.75 - price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Example data here given on a ... 24/28 core unit

(cores are constructed with ... G60 gal)
24 ga. Galvanized for the first ... 1 1/3 Revolution
28 ga. Galvanized their after

Each unit comes with (Energy Equalizers for equalizing flight energy)

Each unit comes with (Magnetic Deflectors to Improve Separation)

Each unit comes with an Adjustable Slide Gate at Termination
Point at Bottom of core (FOR FINE TUNING SEPARATIONS)

Each unit comes with its own DISPERSAL BOWL at TOP of core.

PRICE: \$ — — — (1) \$ — — — (2) \$ — — — (4)
\$ — — — (6) \$ — — — (8)

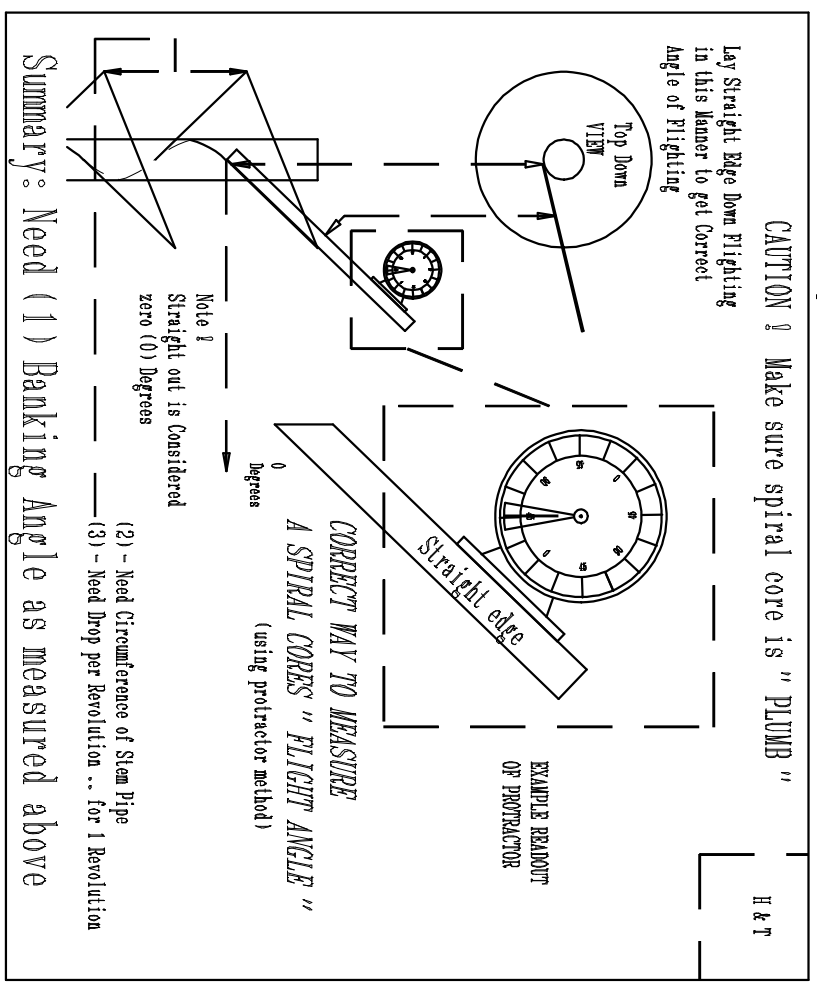
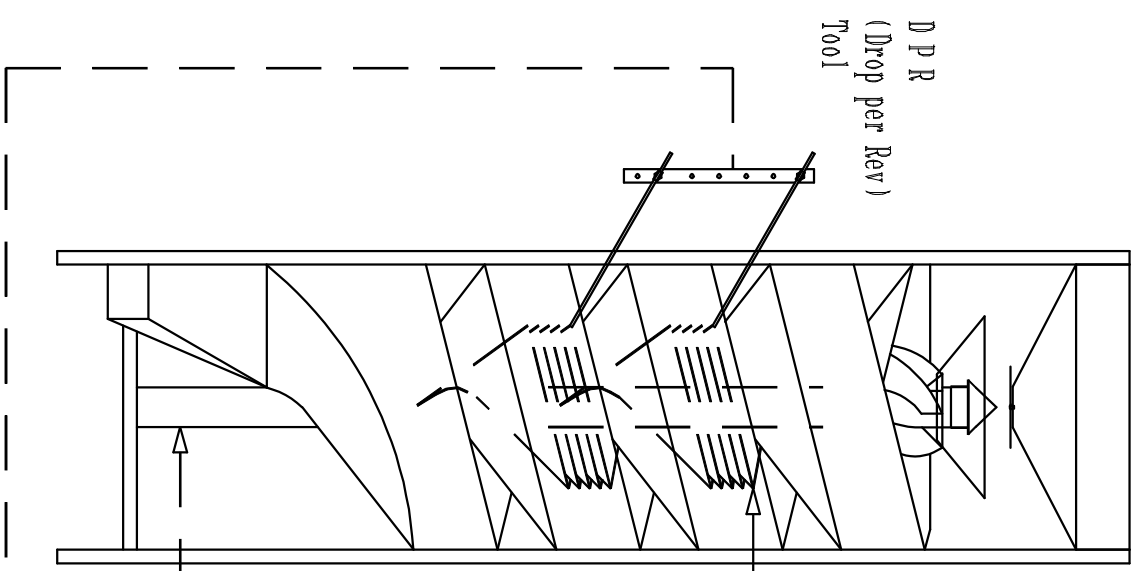
CRATING PRICES: These Crates are for ... Domestic as well as
for Export \$ — — - (1) \$ — — - (2) \$ — — — (4) \$ — — — (6)
\$ — — — (8)

A Word About . . .

“ ANGLES ”

Note! These (3) Measurements are needed in order for us at . . . H & T to Duplicate you core Parameters

Note! To Measure Banking on an "O P E N Spiral" (1)
Use . . . "T O P Flight"

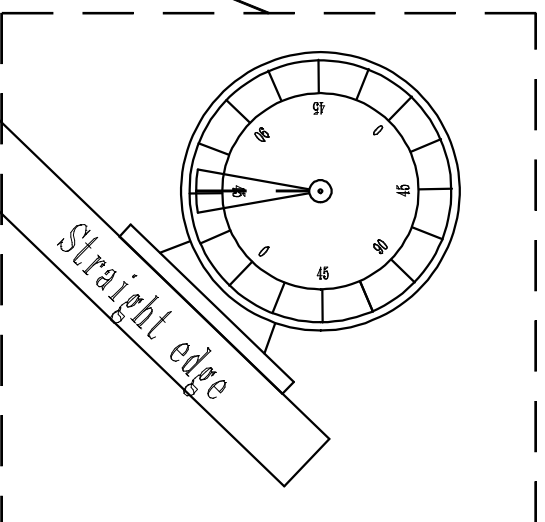
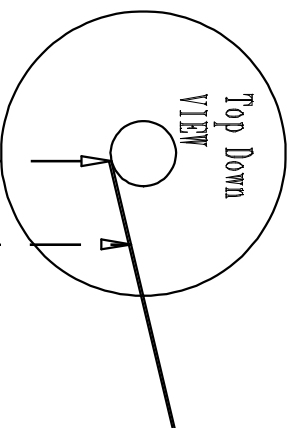


Note! Use special DPR Tool to measure length between flights

CAUTION ! Make sure spiral core is " PLUMB "

H & T

Lay Straight Edge Down Flighting
in this Manner to get Correct
Angle of Flighting



EXAMPLE READOUT
OF PROTRACTOR

CORRECT WAY TO MEASURE
A SPIRAL CORES " FLIGHT ANGLE "

(using protractor method)

0
Degrees

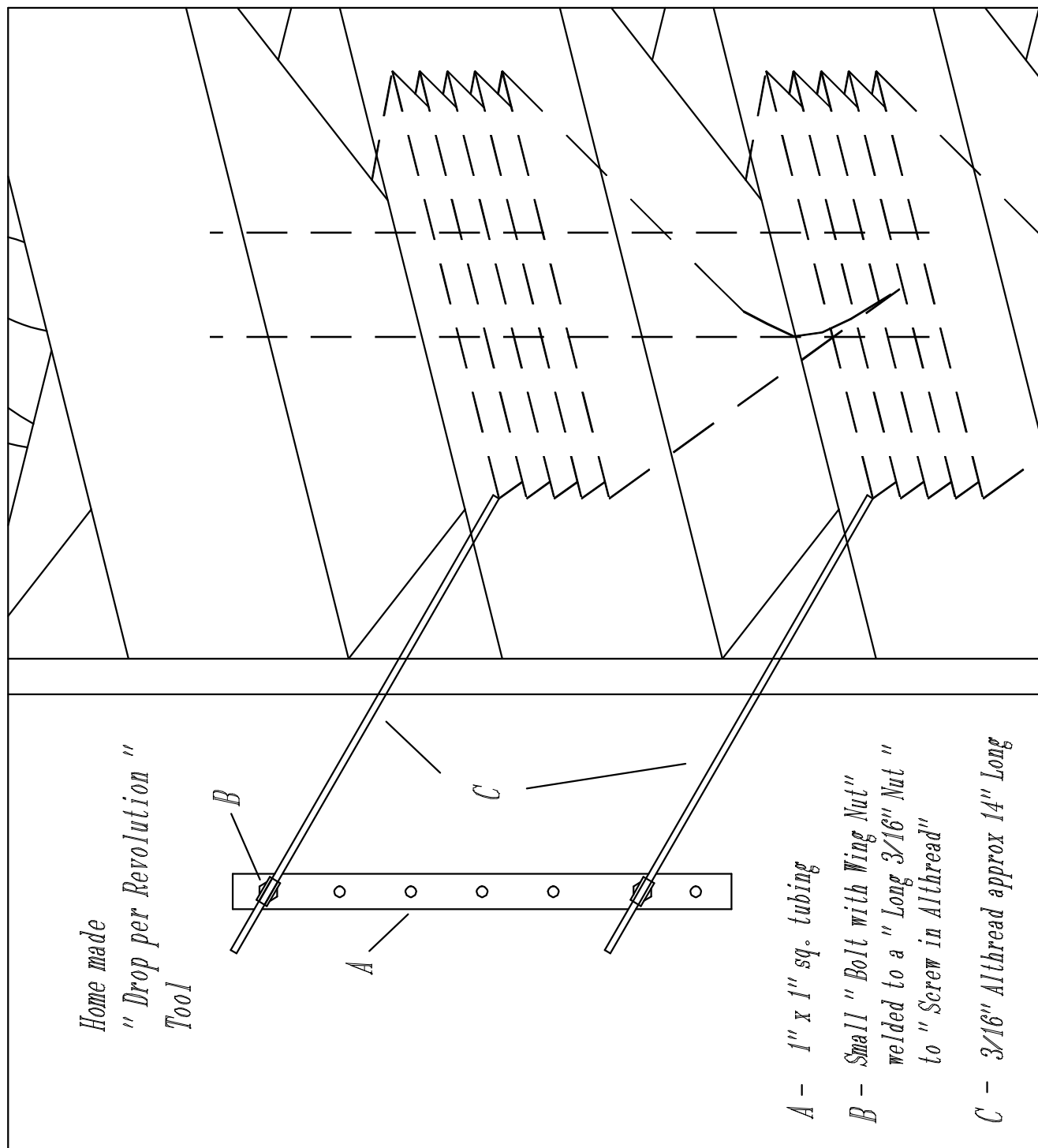
Note !

Straight out is Considered
zero (0) Degrees

(2) - Need Circumference of Stem Pipe

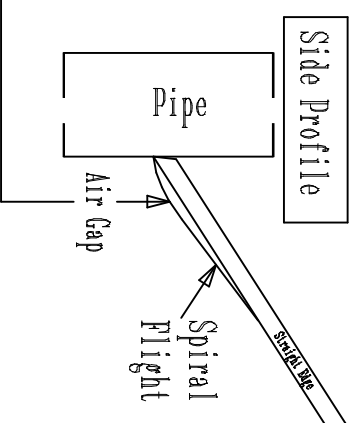
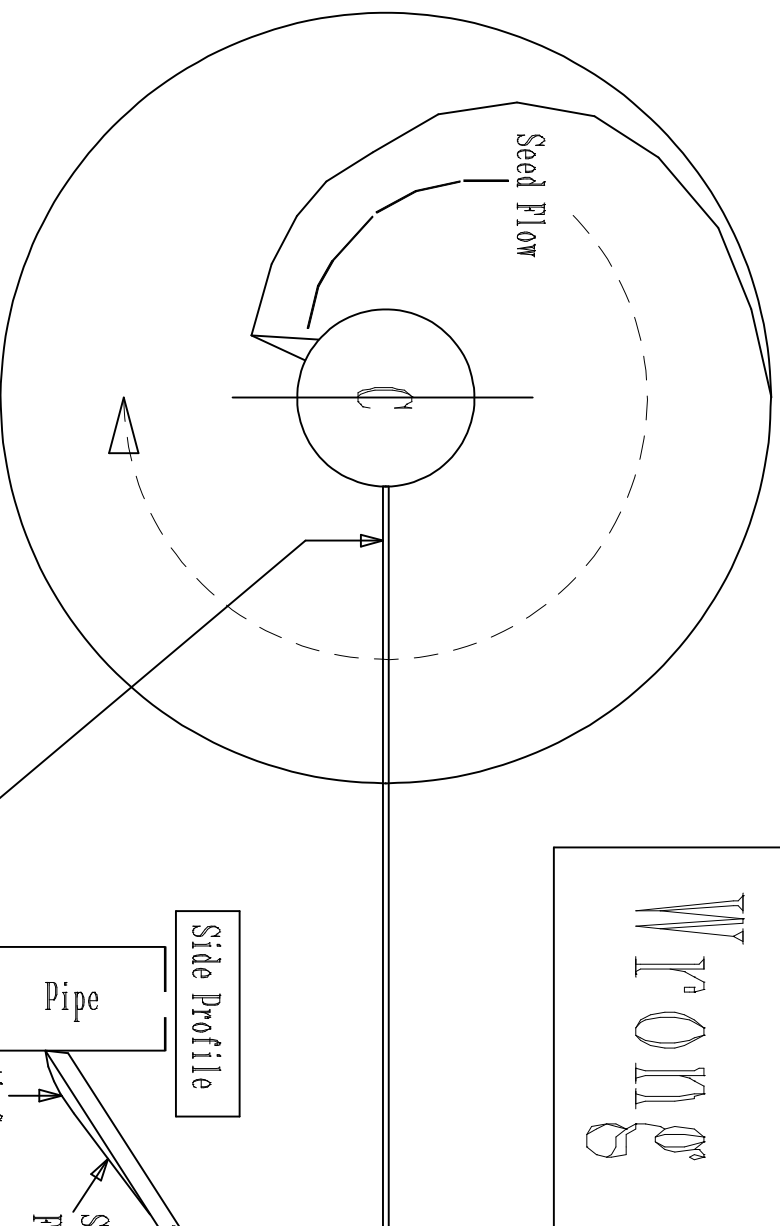
(3) - Need Drop per Revolution .. for 1 Revolution

Summary: Need (1) Banking Angle as measured above



Top Down View #1 Flight

Wrong !!



This way Flying will
Curve away from Straight edge !

Top Down View #1 Flight

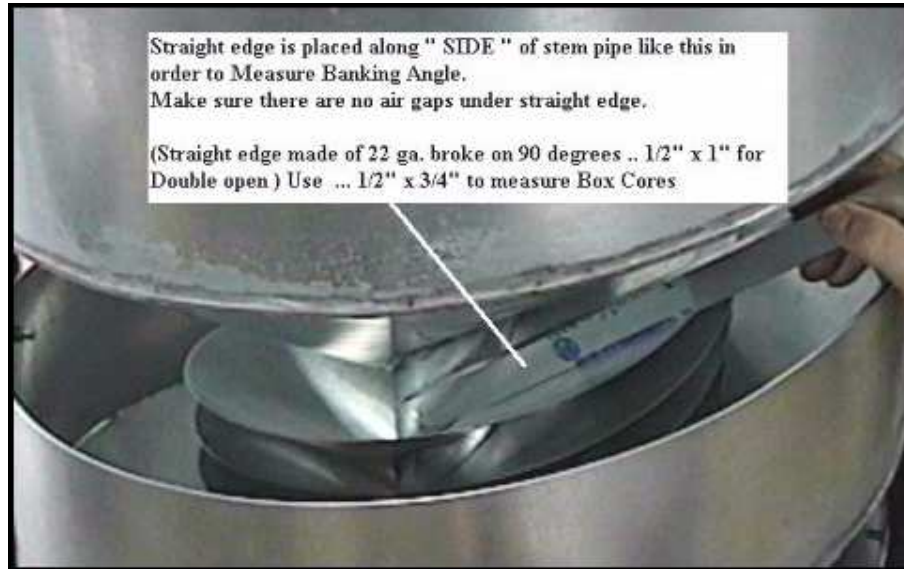
114



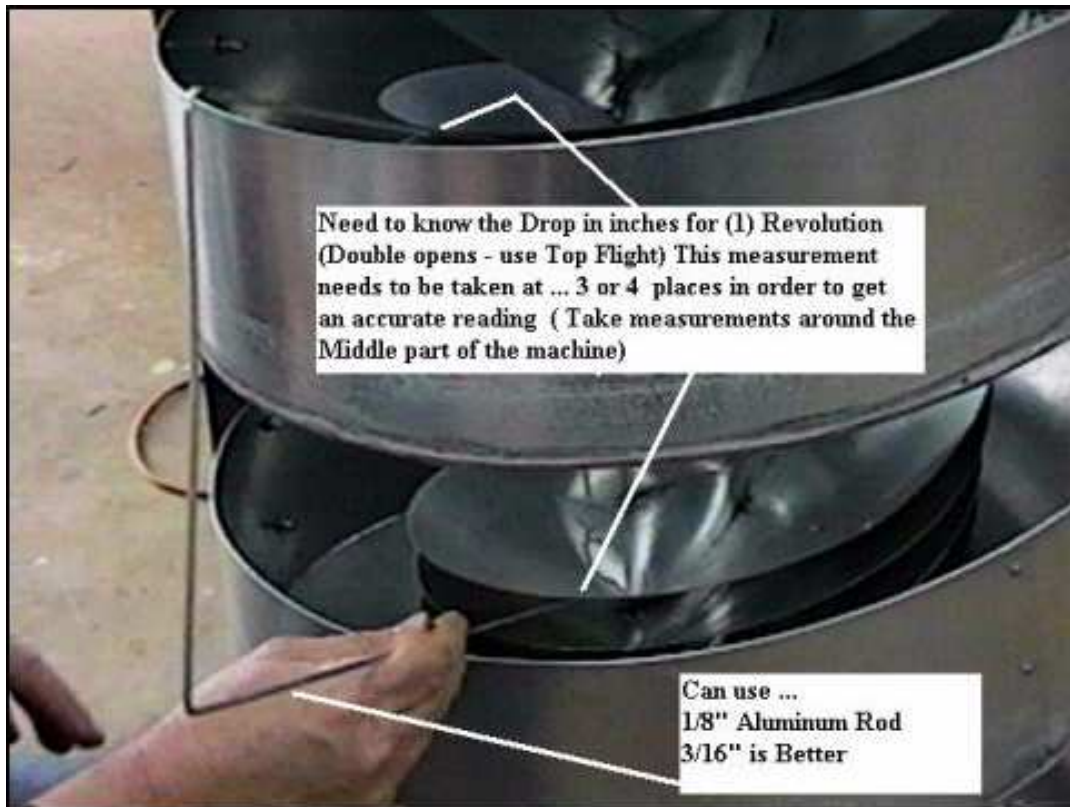
This way Flighting will
form a straight line !

Thus a " True Banking Angle will be Found "

Measuring the Banking Angle



Measuring the Drop per Revolution



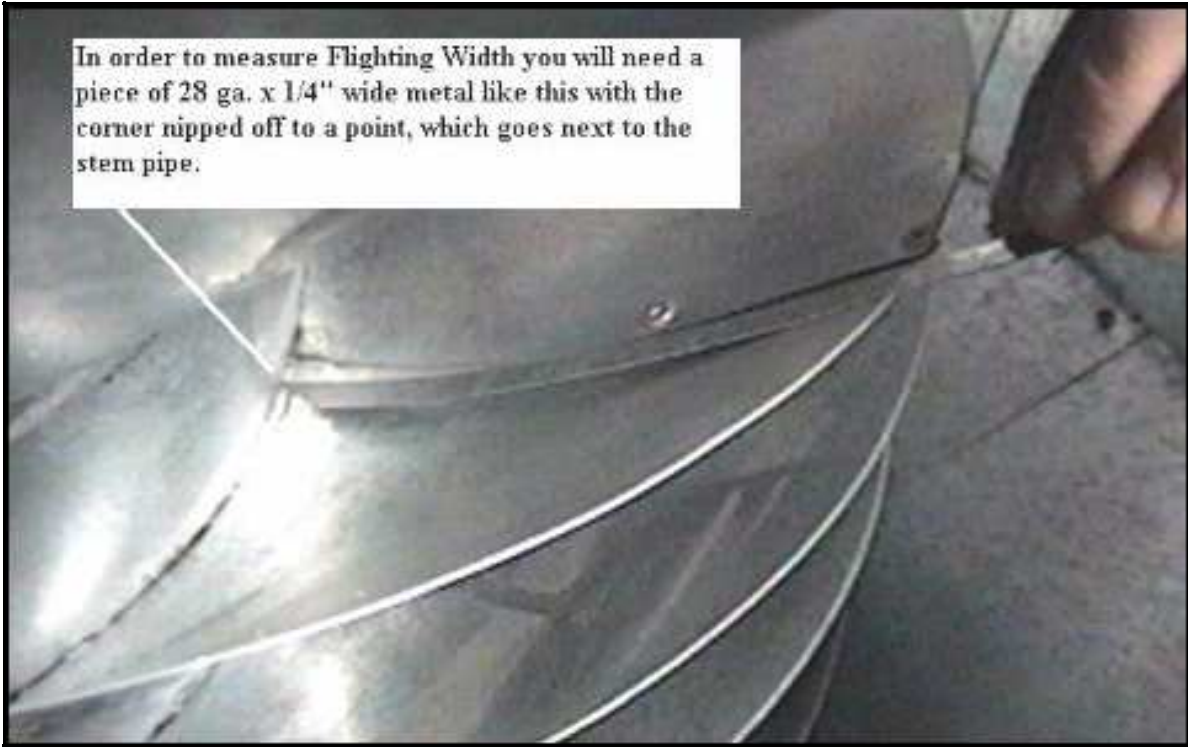
Measuring the Circumference of the Stem Pipe



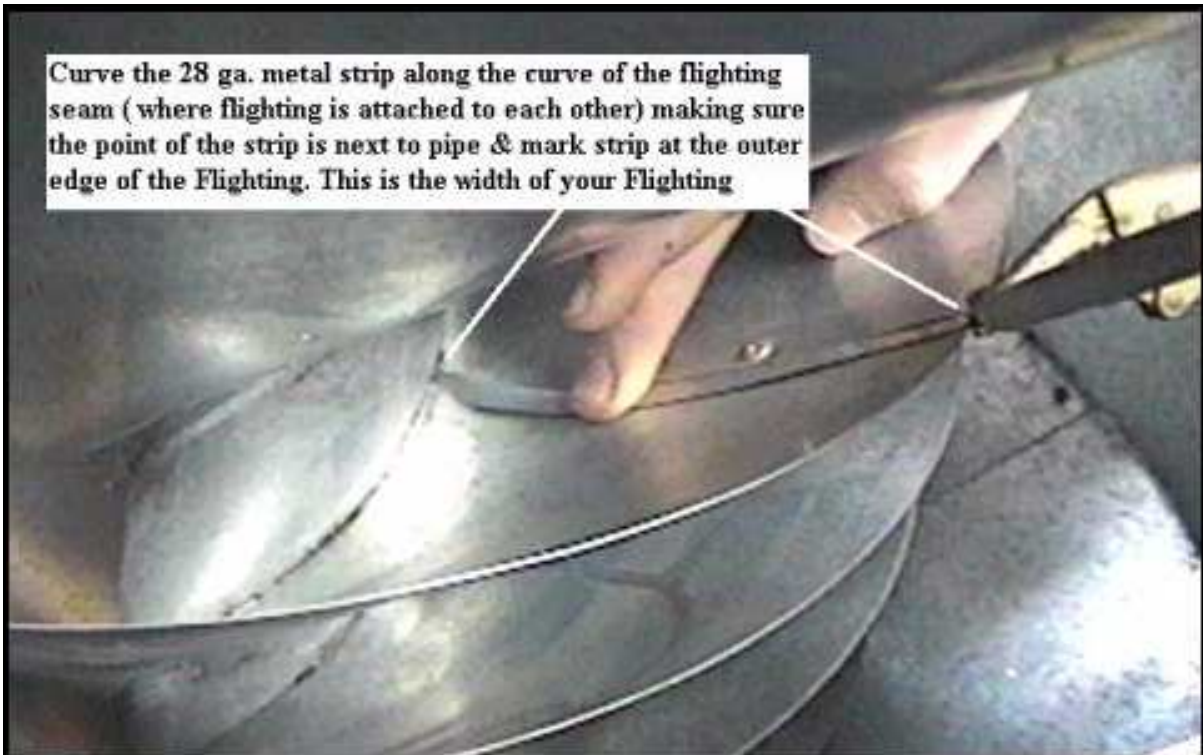
We need an Accurate Stem Pipe Circumference Measurement. One of the best ways to do this is to use a 28 ga. x 1/4 " wide metal Wrap Around Overlap & Mark. Then straighten wrap around out & measure with a tape measurer.

Measuring the Width of the Flighting

In order to measure Flighting Width you will need a piece of 28 ga. x 1/4" wide metal like this with the corner ripped off to a point, which goes next to the stem pipe.



Curve the 28 ga. metal strip along the curve of the flighting seam (where flighting is attached to each other) making sure the point of the strip is next to pipe & mark strip at the outer edge of the Flighting. This is the width of your Flighting



Xport Crating Parameters for Spiral Separator Cleaners

H & T Sheet Metal Mfg. Inc
18427 AR Hwy 13 South
Humnoke, Arkansas

Model of Spiral	List Price	hp(kw)	Motor(s)	Spec. Mtrs	Sub-Total
HT-5	\$ _____	NA	NA	NA	\$ _____
HT-25 (Heavy Duty Hopper)	\$ _____	NA	NA	NA	\$ _____
HT-50 (Standard Hopper)	\$ _____	NA	NA	NA	\$ _____
HT-50 (Heavy Duty Hopper)	\$ _____	NA	NA	NA	\$ _____
HT-50E LP (Low Profile)	\$ _____	NA	NA	NA	\$ _____
HT-100 LP (Low Profile)	\$ _____	NA	NA	NA	\$ _____
HT-200 LP (Low Profile)	\$ _____	NA	NA	NA	\$ _____
HT-300 LP (Low Profile)	\$ _____	NA	NA	NA	\$ _____
HT-400 LP (Low Profile)	\$ _____	NA	NA	NA	\$ _____

Net	Xport Pack		Cont. Lgt	Weight (lbs)	Volume (ft ²)	Dimentions (LxWxH)
HT5	\$ _____	\$ CALL	50"	—	21	_____
HT25	\$ _____	\$ CALL	81.5"	—	34.25	_____
HT50	\$ _____	\$ CALL	80"	—	59	_____
HT50-HD	\$ _____	\$ CALL	81.5"	—	59.375	_____
HT50E	\$ _____	\$ CALL	85.5"	—	55.5	_____
HT100	\$ _____	\$ CALL	97"	—	110	_____
HT200	\$ _____	\$ CALL	97"	—	185	_____
HT300	\$ _____	\$ CALL	97"	—	265	_____
HT400	\$ _____	\$ CALL	97"	—	344.5	_____

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Standard - 26 ga. with 24 ga. Hoppers
can be shipped (1) (2) (3) (4) per crate

LAB SAMPLER, OPEN (HT-5)

PRICE: \$ — — —

Each (Crating Cost - — — -) (Export Crate -)

Net Weight: 80 lbs

Shipping Weight: — - lbs (Domestic) 27"(w)*27"(l)*50"(t)

ONE (1) CORE, OPEN (HT-25)

with "Heavy Duty 16 ga black iron self cleaning
Hopper System"

PRICE: \$ — — —

Each (Crating Cost - — — -) (Export Crate -)

Net Weight: 108 lbs

Shipping Weight: — - lbs (Domestic) 27"(w)*27"(l)*82"(t)

TWO (2) CORE, DOUBLE OPEN (CELLAND)

PRICE: \$ — — — -

Each (Crating Cost - — — -) (Export Crate -)

Net Weight: 160 lbs

Shipping Weight: — - lbs (Domestic)

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Standard - 26 ga. with 24 ga. Hoppers
can be shipped (1) (2) (3) (4) per crate

HT-50 (Shorty), DOUBLE OPEN

PRICE: \$ — — —

Each (Crating Cost = — — —) (Export Crate =)

Net Weight:

Shipping Weight: 000 lbs (Domestic) 47 1/4" (w) * 56" (t) * 27" (l)
000 lbs (Export)

TWO(2) CORE, DOUBLE OPEN (HT-50)

PRICE: \$ — — —

Each (Crating Cost = — — —) (Export Crate =)

Net Weight: 165 lbs

Shipping Weight: — - lbs (Domestic) 47 1/4" (w) * 80" (t) * 27" (l)

TWO(2) CORE, DOUBLE OPEN (HT-50)

with "Heavy Duty 16 ga black iron self cleaning
Hopper System"

PRICE: \$ — — — -

Each (Crating Cost = — — —) (Export Crate =)

Net Weight: 181 lbs

Shipping Weight: — - lbs (Domestic) 47 1/4" (w) * 82" (t) * 27" (l)

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Standard - Extra Heavy Duty

HT-5

(Machines are constructed of G60 galvanized sheet metal and Steel Leg Material)

Basic Machines

26 ga. = \$ — — —

24 ga. = \$ — — —

22 ga. = \$ — — —

HT-25

(Machines are constructed of G60 galvanized sheet metal and Steel Leg Material)

Basic Machines

26 ga. = \$ — — — Hopper (24 ga.) “ Heavy Duty 16 ga
24 ga. = \$ — — — Hopper (24 ga.) black iron self cleaning
22 ga. = \$ — — — - Hopper (24 ga.) Hopper System”

HT-50 (Shorty)

(Machines are constructed of G60 galvanized sheet metal and Steel Leg Material)

Basic Machines

* Add \$ — — - to these prices if
26 ga. = \$ — — — Hopper (24 ga.)* “ Heavy Duty 16 ga
24 ga. = \$ — — — Hopper (24 ga.)* black iron self cleaning
22 ga. = \$ — — — - Hopper (24 ga.)* Hopper System “ is needed!

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Standard - Extra Heavy Duty

HT-50

(Machines are constructed of G60 galvanized sheet metal and Steel Leg Material)

Basic Machines

* Add \$ — — - to these prices if

26 ga. - \$ — — — -	..... Hopper (24 ga.)*	“ Heavy Duty 16 ga
24 ga. - \$ — — — -	..... Hopper (24 ga.)*	black iron self cleaning
22 ga. - \$ — — — -	..... Hopper (24 ga.)*	Hopper System “ is needed!

HAGAN same as above

CELLAND

(Machines are constructed of G60 galvanized sheet metal and Steel Leg Material)

Basic Machines

* Add \$ — — - to these prices if

26 ga. - \$ — — — -	..... Hopper (24 ga.)*	“ Heavy Duty 16 ga
24 ga. - \$ — — — -	..... Hopper (24 ga.)*	black iron self cleaning
22 ga. - \$ — — — -	..... Hopper (24 ga.)*	Hopper System “ is needed!

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Enclosed LP (Box) Spirals - Standard Cores (26 ga.)
with Seed Dams & Manuals

ONE (1) CORE, ENCLOSED SPIRAL (HT-50E)

PRICE: \$— — — - (1) \$— — — - (2) \$— — — - (3)

\$— — — - (4) * Note - Discount of \$ 50.00 if "Top" not needed

Each (Crating & Fork Skid cost - [CALL](#))

Shipping Weight: — - lbs (Steel Skid+ Crate - **Domestic**)

TWO(2) CORE, ENCLOSED SPIRAL (HT-100)

PRICE: \$— — — - (1) \$— — — - (2) \$— — — - (3)

\$— — — - (4) * Note - Discount of \$100.00 if "Top" not needed

Each (Crating & Fork Skid cost - [CALL](#))

Shipping Weight: — - lbs (Steel Skid+ Crate - **Domestic**)

FOUR(4) CORE, ENCLOSED SPIRAL (HT-200)

PRICE: \$— — — - (1) \$— — — - (2) \$— — — - (3)

\$— — — - (4) * Note - Discount of \$200.00 if "Top" not needed

Each (Crating & Fork Skid cost - [CALL](#))

Shipping Weight: — — lbs (Steel Skid+ Crate - **Domestic**)

SIX(6) CORE, ENCLOSED SPIRAL (HT-300)

PRICE: \$— — — - (1) \$— — — - (2) \$— — — - (3)

\$— — — - (4) * Note - Discount of \$300.00 if "Top" not needed

Each (Crating & Fork Skid cost - [CALL](#))

Shipping Weight: — — lbs (Steel Skid+ Crate - **Domestic**)

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Enclosed LP (Box) Spirals - Standard Cores (26 ga.)
with Seed Dams & Manuals

EIGHT(8) CORE, ENCLOSED SPIRAL (HT-400)

PRICE: \$ — — — — (1) \$ — — — — (2) \$ — — — — (3)

\$ — — — — (4) * Note - Discount of \$400.00 if "Top" not needed

Each (Crating & Fork Skid cost = [CALL](#))

Shipping Weight: — — lbs (Steel Skid+ Crate = [Domestic](#))

*** EIGHT(8) CORE, ENCLOSED SPIRAL (HT-400)**

DOUBLE BOTTOM PRICE: ["SAME AS ABOVE"](#)

Enclosed HP (HIGH PROFILE) Machines

Enclosed (Box) Spirals - Standard Cores (28 ga.)
with Seed Dams & Manuals

(1) **HT-50EHP** — \$ — — — - Domestic crate & fork skid ([CALL](#))

(1) **HT-100HP** — \$ — — — - Domestic Crate & fork skid ([CALL](#))

(1) **HT-200HP** — \$ — — — - Domestic Crate & fork skid ([CALL](#))

(1) **HT-300HP** — \$ — — — - Domestic Crate & fork skid ([CALL](#))

(1) **HT-400HP** — \$ — — — - Domestic Crate & fork skid ([CALL](#))

H & T SHEET METAL MFG

2009 Wholesale Price Structure

Enclosed (Box) Spirals

**FOUR (4) CORE, ENCLOSED SPIRAL (HAGAN)
“MAGIC BOX”**

PRICE: \$ — — — - (1) \$ — — — - (2) \$ — — — - (3)

\$ — — — - (4)* Note - Discount of \$200.00 if “Top” not needed

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above, simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core lengths..If for instance a longer core is needed...Use price derived at above & divide by 49.75 - price per inch (A)..then Multiply extra inches needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFIT HEADS for above cores - \$ — — - each

CRATING PRICES: These Crates are for ... Domestic as well as
for Export \$ — — - (1) \$ — — - (2) \$ — — — (4) \$ — — — (6)
\$ — — — (8)

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS Stainless Steel/Galv - Standard Flighting

8 cores & up ^

(26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26/26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24/24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22/22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
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needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFIT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS Stainless Steel - Standard Flighting

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core
lengths..If for instance a longer core is needed..Use price derived at
above & divide by 49.75 = price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFIT HEADS for above cores = \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

FOR CANOLA

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above, simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core lengths..If for instance a longer core is needed...Use price derived at above & divide by 49.75 - price per inch (A)..then Multiply extra inches needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Galvanized Metal - 8 Inch Flighting

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above, simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core lengths..If for instance a longer core is needed...Use price derived at above & divide by 49.75 - price per inch (A)..then Multiply extra inches needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS Stainless Steel/Galv - 8 Inch Flighting

8 cores & up ^

(26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)

(26/26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — —)

(24/24 ga.- \$ — — —) (22/24 ga.- \$ — — —)

(22/22 ga.- \$ — — —)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
simply pick price from above list and multiply by ... 1.073

Note(2) Above prices are all based on H&T's standardized 49.75" core
lengths..If for instance a longer core is needed...Use price derived at
above & divide by 49.75 - price per inch (A)..then Multiply extra inches
needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Stainless Steel - 8 Inch Flighting

8 cores & up ^

(28 ga.- \$ — — —) (26/28 ga.- \$ — — —) (24/28 ga.- \$ — — —)
(26 ga.- \$ — — —) (24/26 ga.- \$ — — —) (22/26 ga.- \$ — — — -)
(24 ga.- \$ — — — -) (22/24 ga.- \$ — — — -)
(22 ga.- \$ — — — -)

Multipliers

(1) - 1.097 (2) - 1.073 (4) - 1.048 (6) - 1.024 (8) - 1

Note(1) To figure the price of say (2) cores of a preferred guage above,
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Note(2) Above prices are all based on H&T's standardized 49.75" core
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needed by (A) ADD THIS ANSWER TO ORIGINAL PRICE

Note (3) RETROFTT HEADS for above cores - \$ — — - each

H & T SHEET METAL MFG

2009 Wholesale Price Structure

EIGHT(8) FLIGHT CORE UNITS

Example data here given on a ... 24/28 core unit

(cores are constructed with ... G60 gal)
24 ga. Galvanized for the first ... 1 1/3 Revolution
28 ga. Galvanized their after

Each unit comes with (Energy Equalizers for equalizing flight energy)

Each unit comes with (Magnetic Deflectors to Improve Separation)

**Each unit comes with an Adjustable Slide Gate at Termination
Point at Bottom of core (FOR FINE TUNING SEPARATIONS)**

Each unit comes with its own DISPERSAL BOWL at TOP of core.

**PRICE: \$ — — — (1) \$ — — — (2) \$ — — — (4)
\$ — — — (6) \$ — — — (8)**

**CRATING PRICES: These Crates are for ... Domestic as well as
for Export \$ — — - (1) \$ — — - (2) \$ — — — (4) \$ — — — (6)
\$ — — — (8)**

“ Whirlybird “
Gravity Spiral Separator
for . . Steelshot

Height = 78 1/2 “

Barrel Dia = 35”



Whirlybird

SPIRAL SEPARATORS - A Close Look At How They Work

A - What type of products can be run on a Spiral Separator ?

Spiral separators will SEPARATE

If set up Properly - ROUND ... from... UNROUND products

Question? What would we expect to separate from Soybeans
Dust & small foreign material
Unround Seed (shrivels ... etc)
Split Seed

Question? What about Steel Shot
Steel dust & small pieces of steel or foreign material
Unround Shot

Question? What about something like Alfalfa
Will separate Alfalfa from ... Round grass seeds etc

WHERE DO WE START

The very first thing we need is a clear understanding of how a Round object acts ... or ... The Path it Draws ... so to speak when the round object ... Rolls Down a Spiral Flighting

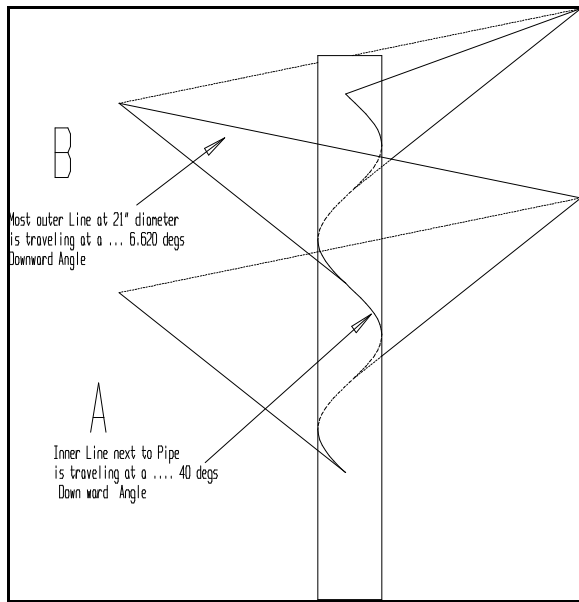


FIG 1

Look very carefully at a side profile of a Single Spiral Flight wrapped around a Stem Pipe

The Spiral Flighting has a (1) Fixed - Banking Angle and “ Here is the catch “
a *Large Variety* of Downward Angles

Why a Large variety of Downward Angles?

Because Angle ... A (Path traveled next to Pipe) is a 40 deg
Down Angle

Angle ... B (Outside Edge of the Flighting) is a
6.620 deg Down Angle

Stem Pipe Diameter = 2.9045 inches

Total over all Diameter of Spiral = 21 inches

Drop per Revolution = 7.656 inches

What Does This All Mean ... Or Better Yet How Does This Angle Change Affect A Rolling Round Object When Dropped At The Top Of The Flighting Up Next To The Stem Pipe

It means as the Spiral Flighting Diameter Increases
(with all things remaining the same)

The Downward Angle Decreases

Now we all know that as the Downward Angle Decreases the
rolling object will **SLOW DOWN**

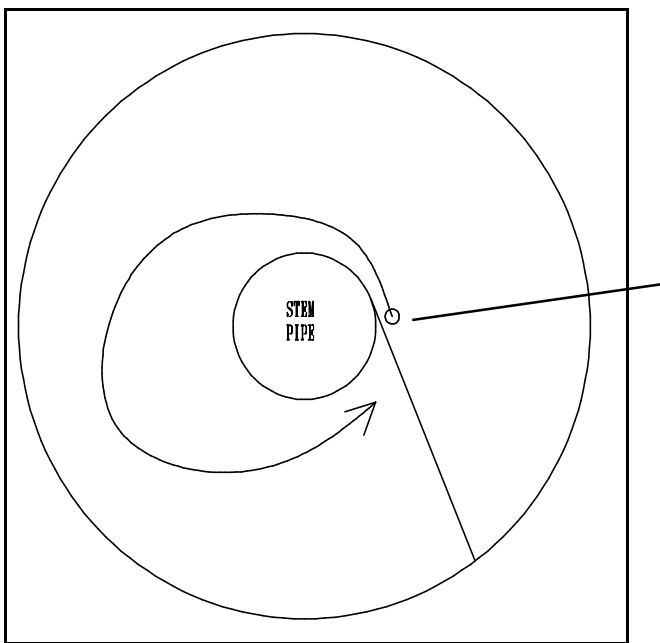


FIG 2

Now look at the Top Down view
Fig.2 A Single flight Spiral
Separator

The round object represents the
Starting Point (SP) at the Top of
the flighting & up next to the
Stem Pipe

The line coming off the round
object with an arrow at the end

represents an example path the round object will make.

What happens is that as the round object travels out to a larger diameter “ it slows down” because ... the Downward Angle Decreases ... the round object loses energy and tries to fall back to the center of the stem pipe. Although it will not actually hit the stem pipe as other forces are working to prevent this.

It (round) will reach a Low Point @ 1 revolution down from
the SP = (perigee point 1)

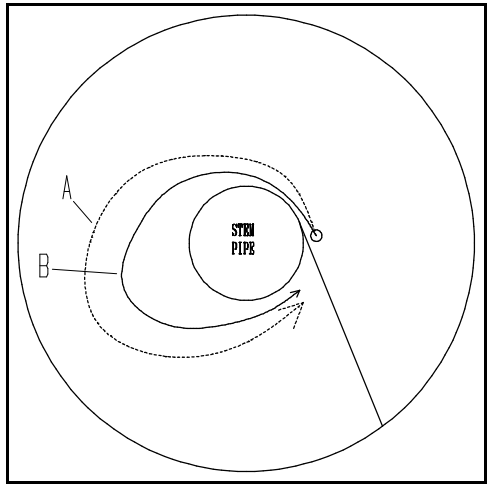


FIG 3

Now let's look at the path of an object that is Less Round - Path B
Fig 3

Will look similar to path ... A
except ... won't travel as far out

Unround is ... less energetic

Ok the Paths will look similar on the next level .. Down ...on
the spiral fighting But will ... travel out to a Larger Diameter
(UP TO A POINT)

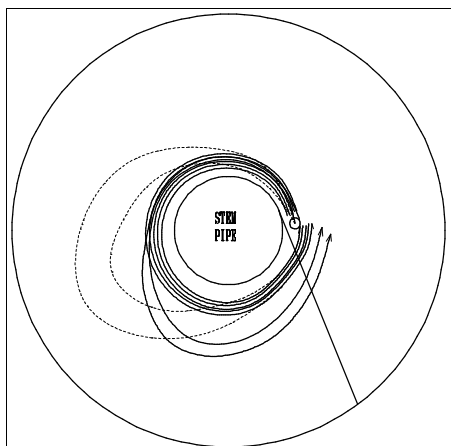
IMPORTANT!

*All the paths ... High points & Low points will ... Stay close to
the same locations relative to the SP (starting point) no
matter how many levels or revolutions the spiral has.*

**OK ! NOW THAT WE KNOW WHY THIS PATH IS FORMED
BY .. ROUND & LESS ROUND OBJECTS**

LETS GET TO THE ... TEST /// “NOT SO FAST “

Let's look at a bunch of ... Rounds, Not so Round and plain old
Unround stuff going down the fighting at the same time - FIG 4



It will take a little longer for the
Rounds to gain speed enough to
break
free of the .. Main Mass .. & when it
does Rounds will ..Swing Out .. Less

Notice Previous Paths - dotted lines

**OH YES! THE QUESTION HAS TO COME UP
HOW MUCH YOU FEED IN THE FLIGHTING AT ANY
MOMENT IS VERY IMPORTANT!**

If you feed to much ... called **Overfeeding** .. the Rounds might NEVER break Free and if it breaks free the Swing Out will be Very Small - “ In other Words - No Separation “
THE KEY WORD HERE IS “ **S E P A R A T I O N** “

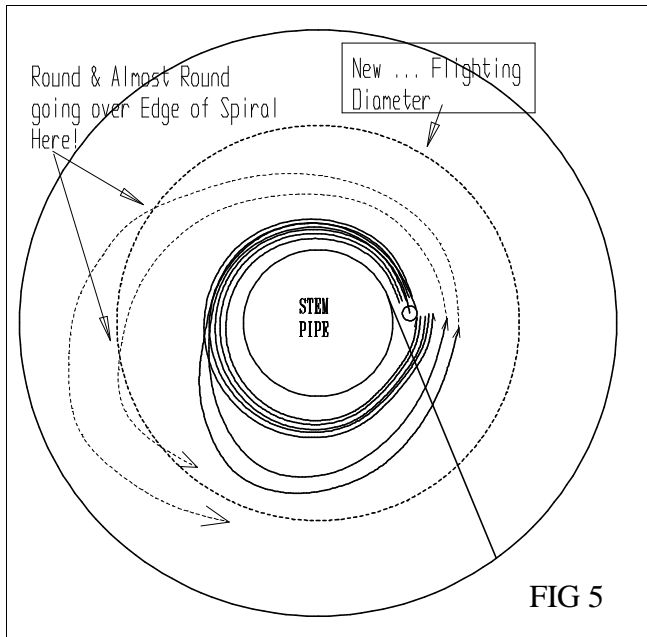
In other words we need room for the Material we are running to get up to their Natural speed .. Unhindered by other material rubbing up against each other *with the exception of dust etc* Sliding up ... or almost next to the stem pipe.
This fast running Track so to speak will allow Rounds to build up speed & separate from Unrounds to the Maximum.

We have toHave ... SEPARATION as we have to set a **DIAMETER** For the Spiral Flighting.

The diameter is DETERMINED by what the User is trying to remove from the Round Product or VICE VERSA
SOMETIMES THE ROUND PRODUCT = BAD
& UNROUND = GOOD PRODUCT

In Fig 5 the (2) Rounds that have made Swing Outs ... Leave the Main part of the Mass at a certain Diameter. If the User wants to keep This - (2) Rounds a Diameter will be set at the
... DOTTED CIRCLE ...

*You - Tester - wants to make sure you are determining this
Diameter on a ... Second or Third Level down from .. Start Point*



Although Very Unrounds tend to Not keep Gaining Altitude up the Spiral Flighting. (Very small unrounds can't get up enough speed) In other words ... Dust etc sort of reaches a Terminal Velocity

The **LENGTH** of the Spiral flighting needs to be enough so all the Rounds have a chance to break free of the Unrounds & Swing Out over the Edge of the *Set Diameter* we have worked out It's a question of Feed Flow Amount

OK - GOING BACK OVER THIS INFORMATION

- 1 - Banking Angle - Derivative of Downward Angle as defined going around the Stem Pipe
- 2 - Downward AngleDecreases as diameter gets Larger
- 3 - Feed Flow very Important - Material has to have Separation
- 4 - Diameter of Spiral is determined by Swing out of Rounds
- 5 - Length of spiral flighting is determined - after everything else by Feed Flow Amount

Now on to the Test

Now we need the right Tester to run our sample down & a Feed system that will deliver just the ... Right amount of Feed & we run our Test

H & T uses a variety of Single Flight cores 24 inches in Diameter along with a Seed Splitter system

(for getting the feed flow right)

We take Samples at different Diameters & Levels at *Swing out point* of the Product

By taking Samples this will more closely tell us where to

“ Set the Diameter of the Flighting “

We make observations of the terminal altitude of the unrounds & this will let us determine length.

*ONCE DIAMETER & LENGTH ARE DECIDED UPON
A WORKING CORE CAN BE MADE*

Note!

**We can not take a sample with the above 24 inch diameter
Testers to send to a customer**

These testers only give the information (Tester Sample)we need to make a working Spiral Separator.

However we do have Premade test spirals for this purpose !

MAKING THE CORE

Once the information we need to make a core is derived from our testers **we can figure also how many flights that can be attached to the stem pipe.**

After the core is built we have to take into account that ... Each Flight is of different ...**Lengths**

Being of different lengths makes all the ... Starting Points (SP) different. This if you remember will make all of the flights have different points where the Rounds Swing Out (Apogee)

This problem is solved with placing ... *Factory installed equalizer Dams* at the shortest flights Starting Point (SP)

As more flights are added they are in effect no longer than the Shortest #1 Flight

These Equalizers not only cause all flights to have the same Apogee points but will also let the Slide gate at the bottom of the core for Fine Tuning work like it should.

The following page shows a diagram of an - 8 flight core and how # 2 - # 8 flight is Longer than the #1 flight

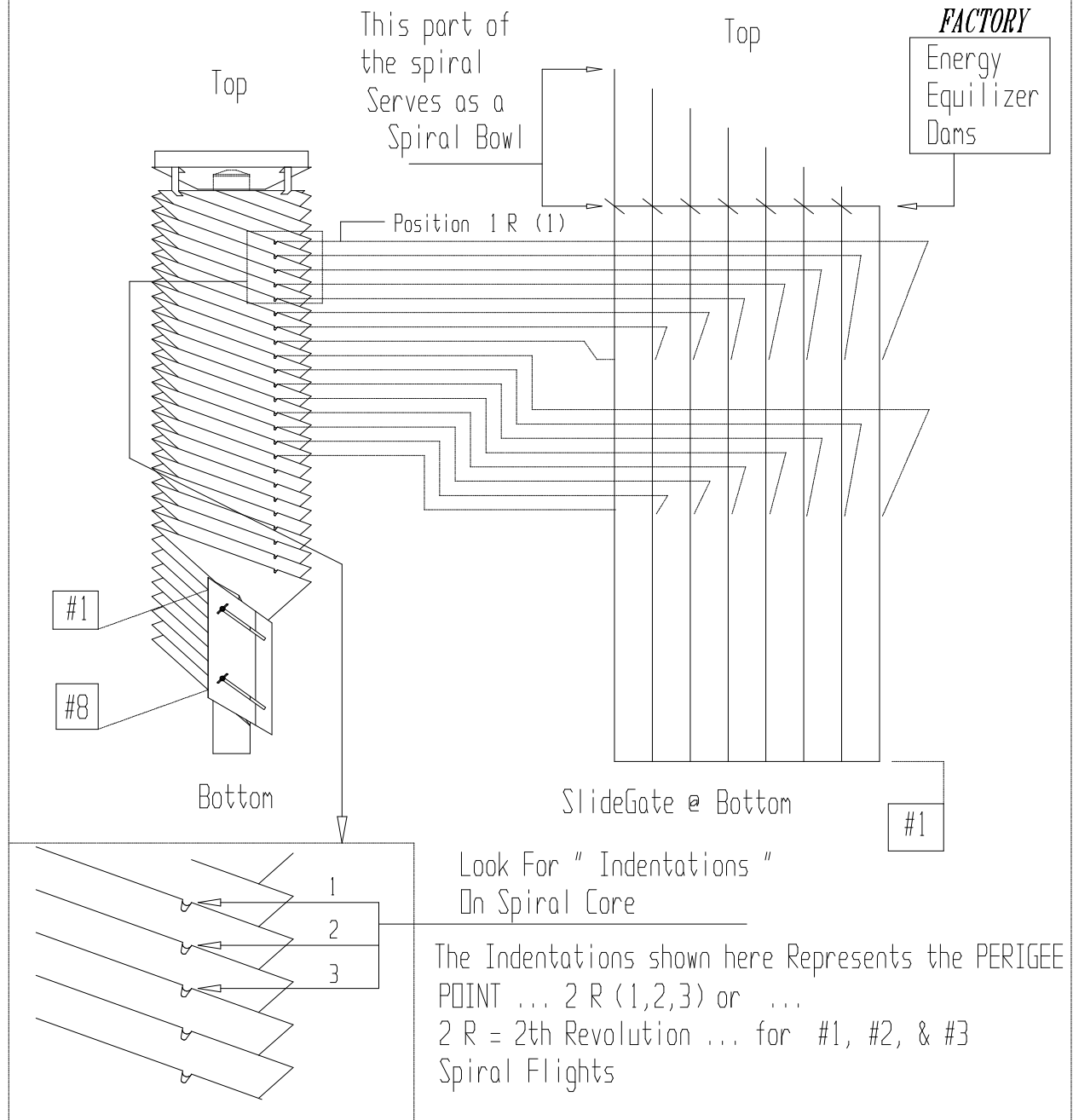
You can see how this problem is solved with “Factory Installed Equalizers”

These simply block the flow on flights 2-8 and make every thing start all over again giving these 7 flights the same energy as #1.

The Indentation marks are simply “Reference Marks” so user can know where he is so to speak Energy wise

These are placed at the “Swing in “ points (Perigee) for all flights

Explanation of Energy Levels *Use as Guide for Placement of " STEEL " Seed Dams*

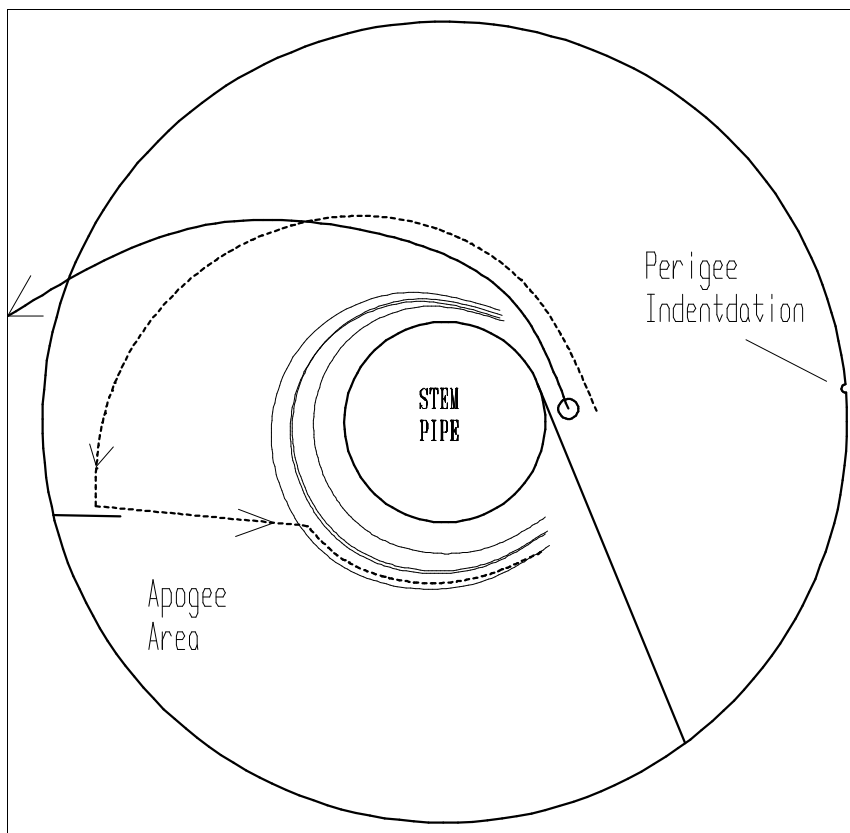


" I N D E N T A T I O N S " ARE USED AS ... ENERGY REFERENCE POINTS

REMOVABLE or MOVEABLE - SEED DAMS

Sometimes the user of the spiral separators might not want some of the stuff that is going over the edge of the separator.

In other words user needs the spiral to be Bigger in Diameter That is sometimes not reasonable so the next best thing we can do is to use Blockers or SEED DAMS



A seed Dam used here to deflect an almost Round back down into Main Mass.

This object is not wanted with the Rounds

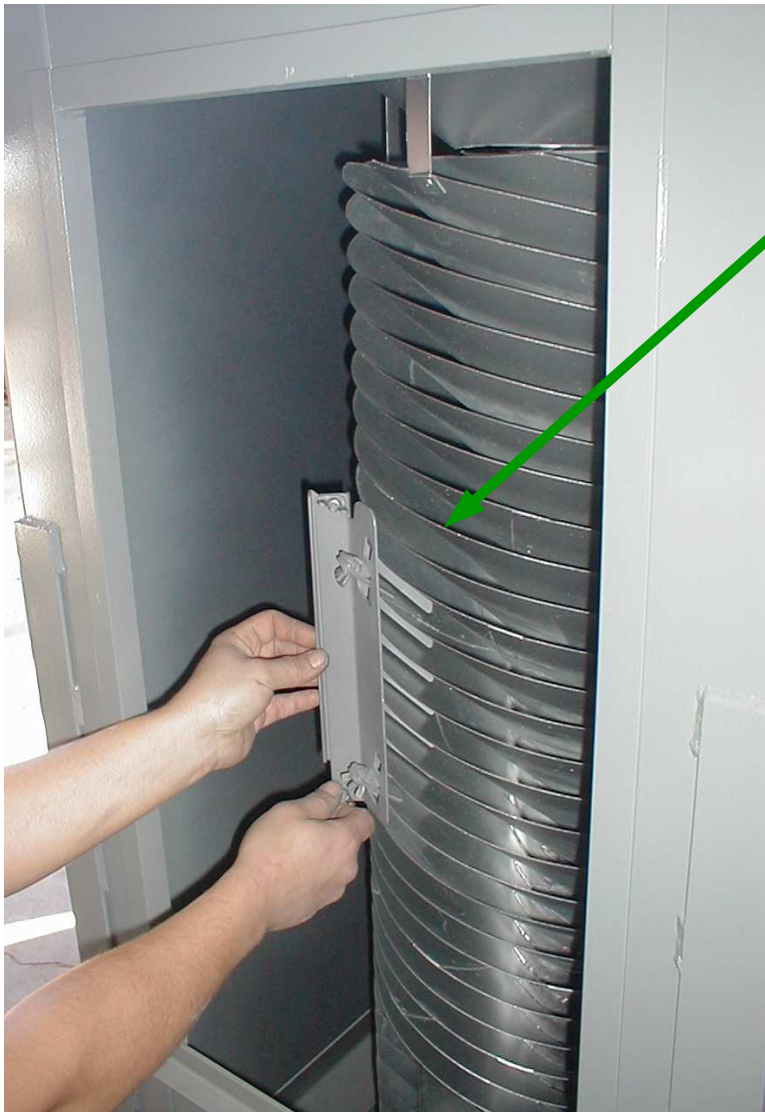
Notice that the location of the Dam will be located ... up hill and Left of the Perigee Indentation notch.

Remember once you have found the Location for one flight you have found it for ALL

The following pictures shows 14 ga. Black Iron Metal Seed Blockers (Seed Dams) being clamped down at the Perigee Point - 2 revolutions down from the SP of # 1 flight. *These Metal dams are made especially for H & T Spiral Cores But can be **Custom made** for any Core Cartridge* This Dam set has (8) Fingers all held in place at the correct deflection Angle by ... 2 Wing Nuts. This placement is an Example Location Placement. *A more realistic placement would be right after the ... Apogee (Swing out) of the ... Round Product.* In other words To the Left of Perigee Point



TIGHTING THE WING NUTS

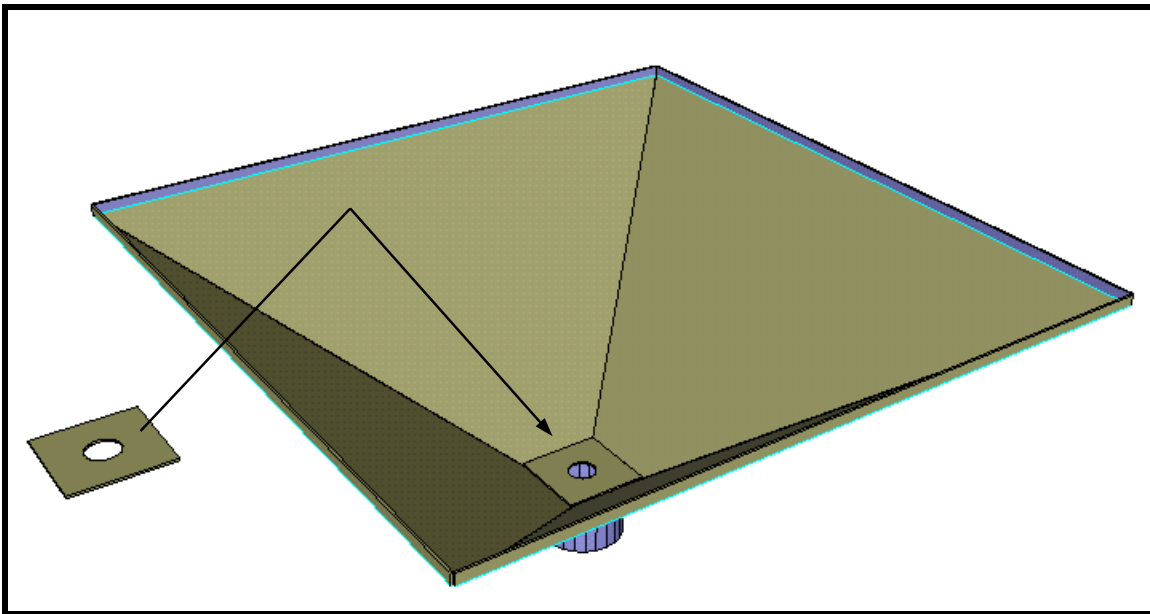


Movable Steel
Seed Dams
being Installed

SUPPLEMENT - Changes for these boxes

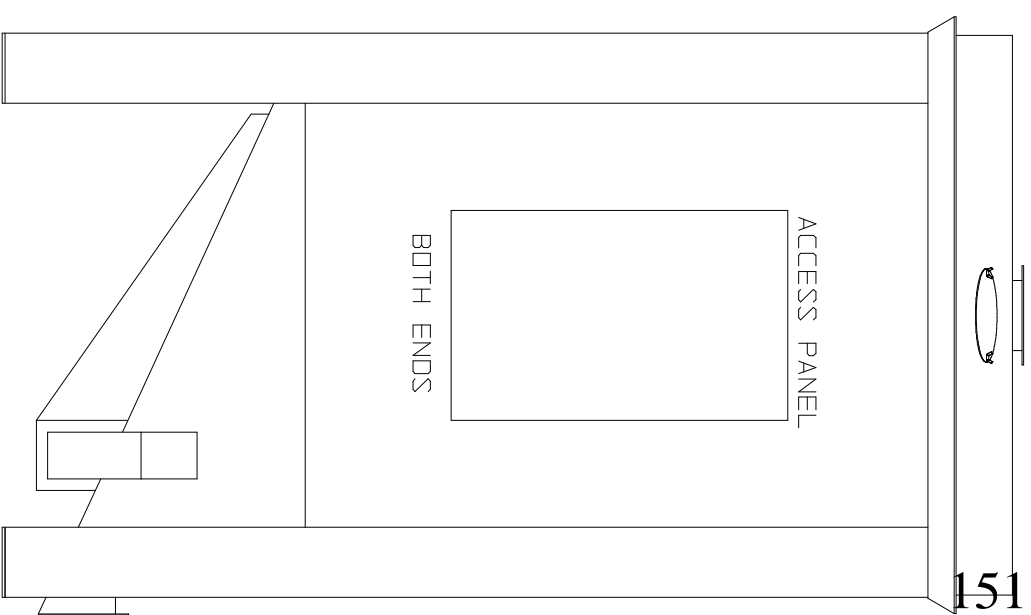
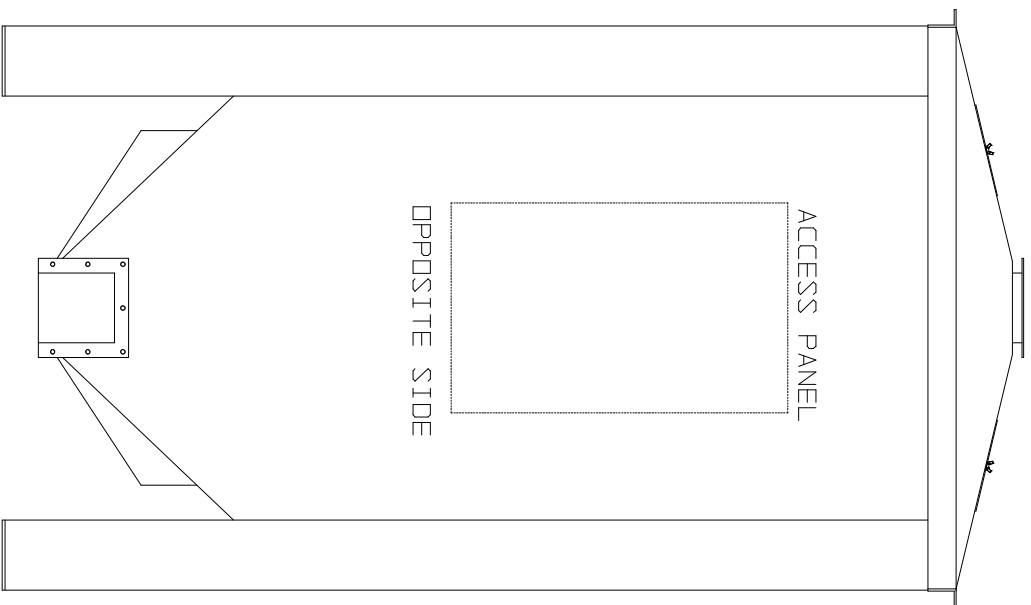
- 1 - All 14 ga construction (Body, Hoppers,
Bottom, Top, etc)**
- 2 - Hopper system - Replaceable (Bolt on)
Hopper Inserts for Precise Seed Flow Control
can be supplied with these cleaners
(Inserts may not be necessary)
Hopper Feed pipe = 10 ga
Improved adjustable feed cones**
- 3 - All steel access cover plates
“ Clear Polycarbonate cover plates optional “**
- 4 - New Polycarbonate bendable plastic doors
with magnetic seals.**
- 5 - Removal (Bolt on rubber shields) - for
easy replacement of rubber.**
- 6 - Improved Anti-interaction rubber curtains
1/16” Neo Rubber (Heavy Duty)**
- 7 - Cores have improved Bowl
Cores have 14 ga energy equalizers
Cores come with Seed Dams with
3x times Magnetic holding power
as our older style seed dams**

INSERTS ... GO HERE !

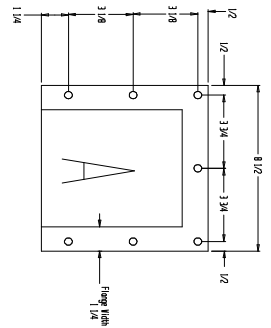
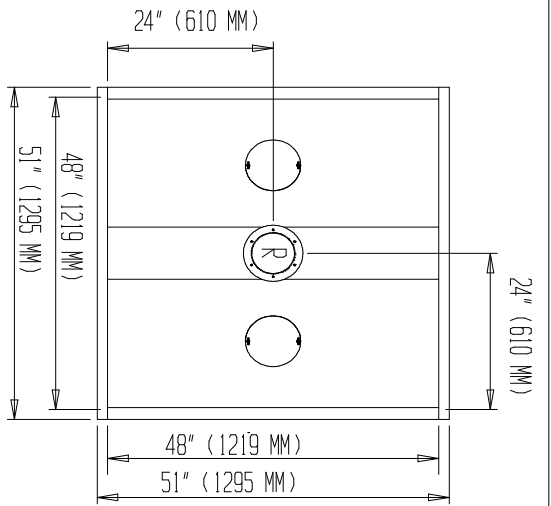


SECTION M

**FOUR (4) CORE
HARDEN TYPE
ENCLOSED SPIRAL
MODEL 200**

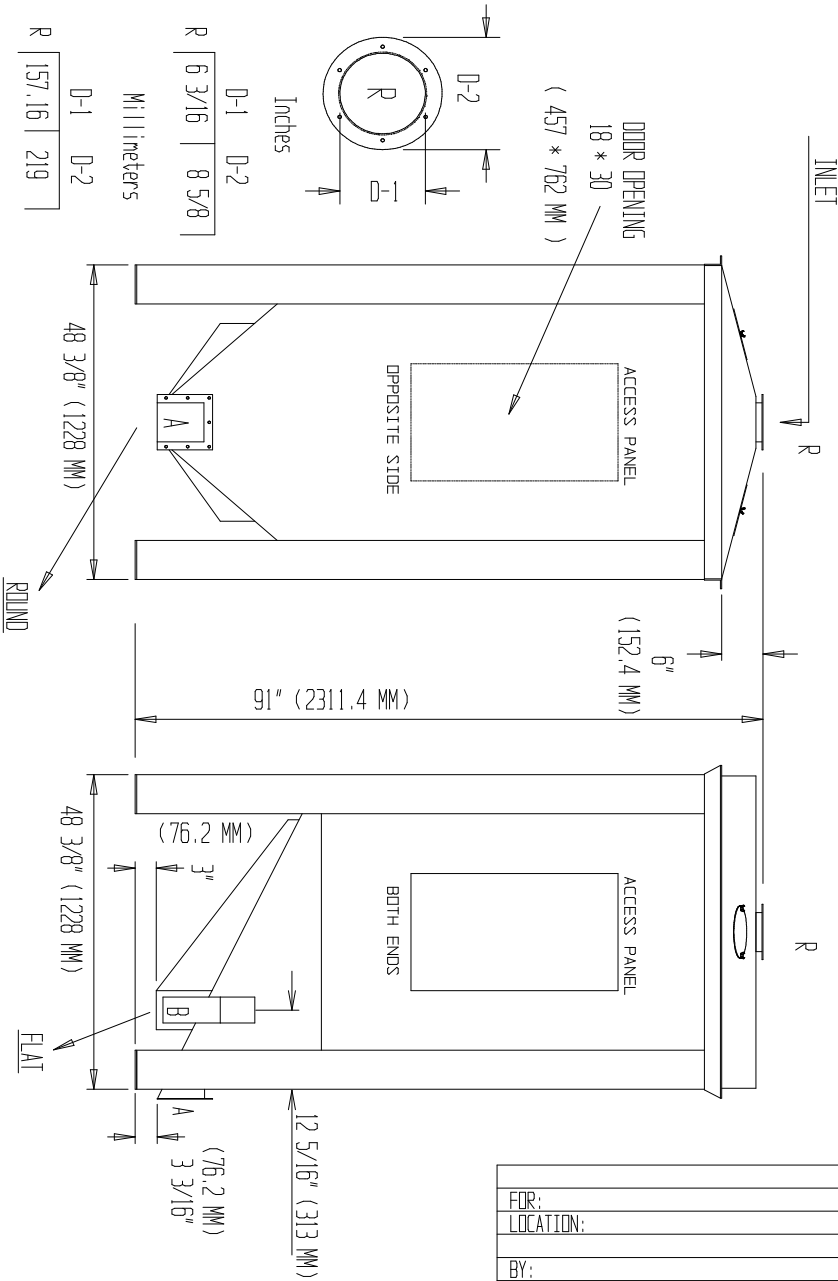
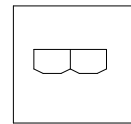


HARDEN TYPE 200 *4 CORE SPIRAL SEPARATOR*



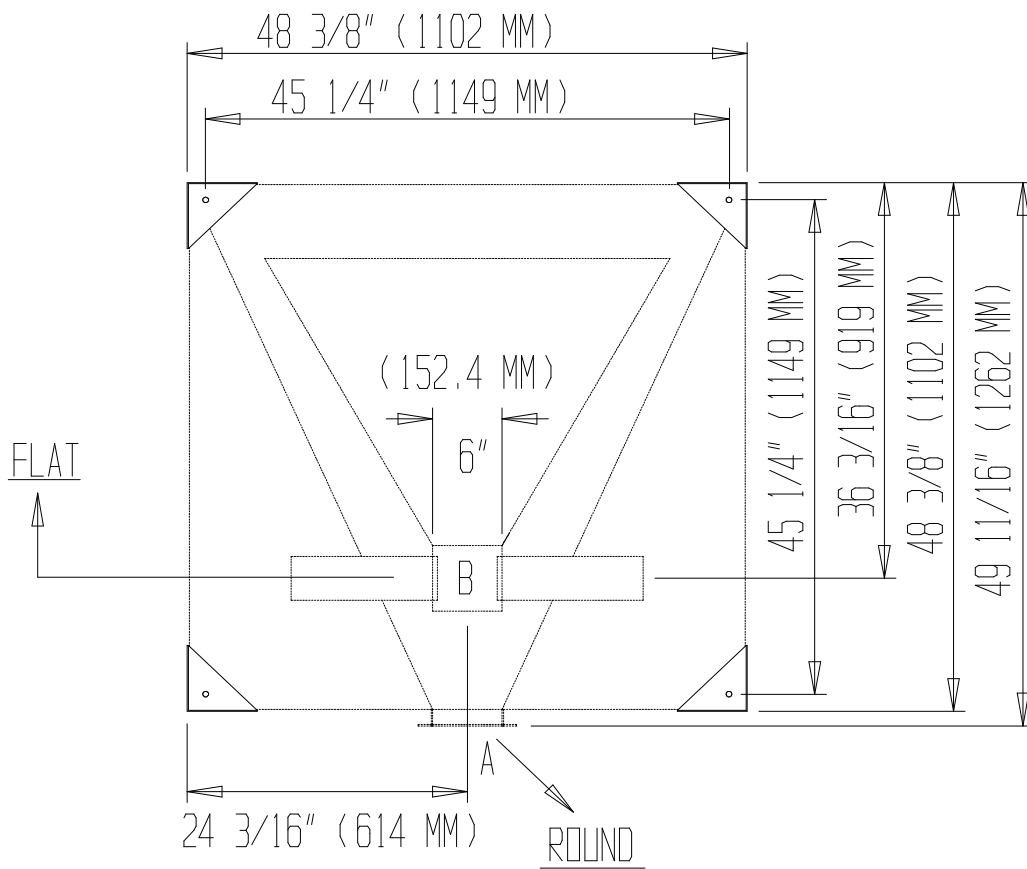
Inches	
A	L
6	6
B	D
6	6 3/4

Millimeters	
A	L
152.4	171.45
B	D
152.4	152.4



FOR:	
LOCATION:	
BY:	
DATE:	2008

DATE: 2008	<i>4 CORE HARDEN TYPE ENCLOSED SPIRAL</i>	Type
Issued by		STANDARD
page		
		Replaces:
		NO. MAIN



TOP - FRONT - SIDE (MAIN)

			<i>4 CORE HARDEN TYPE ENCLOSED SPIRAL</i>	LOW PROFILE
			FOOT PRINT DRAWING	DATE: 2008

TROUBLESHOOTING - “PRINT THIS PAGE”

IF TO MANY ROUNDS GOING INTO REJECTS ... BACK GATE DOWN A BIT

STILL ..TO MANY ROUNDS GOING INTO REJECTS ... SLOW FEED FLOW DOWN

*STILL ..TO MANY ROUNDS GOING INTO REJECTS ... *** TWIST SEED DAMS
OUT A BIT AWAY FROM PIPE - ALL (8) OF THEM*

STILL ..TO MANY ROUNDS GOING INTO REJECTS ... REMOVE ALL (8) SEED DAMS

MIGHT WANT TO CONSIDER A SMALLER DIAMETER CORE — PAGE 141
(ORBIT HEIGHT OF THE REJECT MATERIAL SHOULD DETERMINE DIAMETER OF THE CORE)

MIGHT WANT TO CONSIDER A ** MORE ENERGETIC CORE (See bottom of page)

IF TO MANY REJECTS GOING INTO ROUNDS ... PULL GATE UP A BIT

*STILL .. TO MANY REJECTS GOING INTO ROUNDS ... INCREASE FEED FLOW
“ SLIGHTLY “ (OVERFEEDING = TO MANY ROUNDS IN REJECTS)*

*STILL .. TO MANY REJECTS GOING INTO ROUNDS ... ADD SEED DAMS
NOT FULL ANGLE - ALL (8) OF THEM*

*STILL .. TO MANY REJECTS GOING INTO ROUNDS ... *** APPLY FULL ANGLE
ON - ALL (8) SEED DAMS*

*STILL .. TO MANY REJECTS GOING INTO ROUNDS ... ADD (8) MORE SEED DAMS
“ NOT FULL ANGLE “ — VERTICALLY UNDER — FIRST SET OF 8 DAMS*

STILL .. TO MANY REJECTS GOING INTO ROUNDS :

- BIGGER DIAMETER CORE CAN HELP IF PRODUCT IS NOT .. TO ENERGETIC -

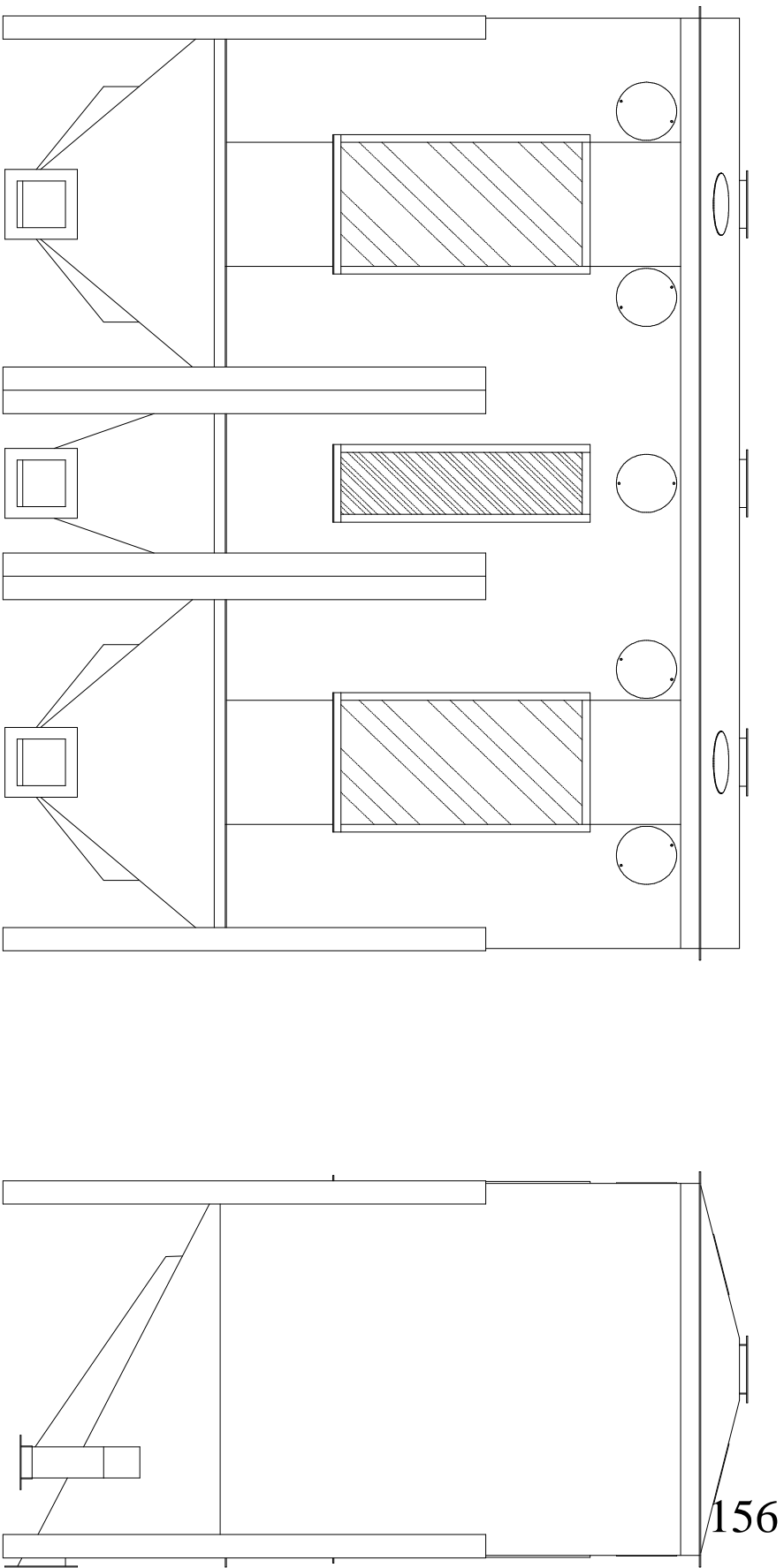
“ *PRODUCT BEING TO ENERGETIC MEANS IT HAS A ... LARGE ORBIT AROUND THE CENTER STEM PIPE
SUCH AS .. LARGE ROUND SEEDS OR STEEL SHOT WOULD HAVE - IN THIS CASE - A CORE LARGE ENOUGH
TO HAVE A POSITIVE EFFECT COULD EXCEED THE LIMITATION SIZE OF THE CABINET ENCLOSURE* “

**IF DUST & SMALLER REJECT MATERIAL WILL ALLOW “ WITHOUT STOPPING
UP THE CORE MIGHT WANT TO CONSIDER A **LESS ENERGETIC CORE
** LESS ENERGETIC CORE = DECREASED DOWNWARD ANGLE ... THAT THE
SPIRAL IS WRAPPED AROUND THE STEM PIPE
(*Standard variations of Downward Angle is (3) degree increments - See Page 90*)**

***** FULL MAXIMUM ANGLE OF SEED DAMS SHOW ON .. PAGE 99 (Top Picture)
(MAX ANGLE = SEED DAM POINTING TO OUTER EDGE OF PIPE - ON LOWER SIDE)**

SECTION N

**EIGHT (10) CORE
ENCLOSED SPIRAL
HT-500**



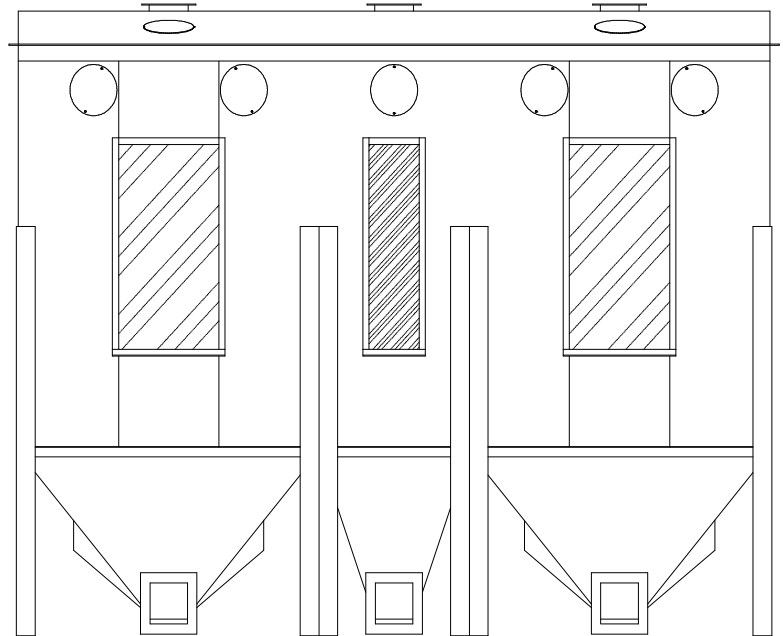
HT-500 Low Profile - Triple Bottom



HT-500 Enclosed Spiral Separator

Completely Enclosed For

- ♦ **Dust Control**
- ♦ **Quiet Operation**
- ♦ **Compactness**
- ♦ **Ease of Handling**

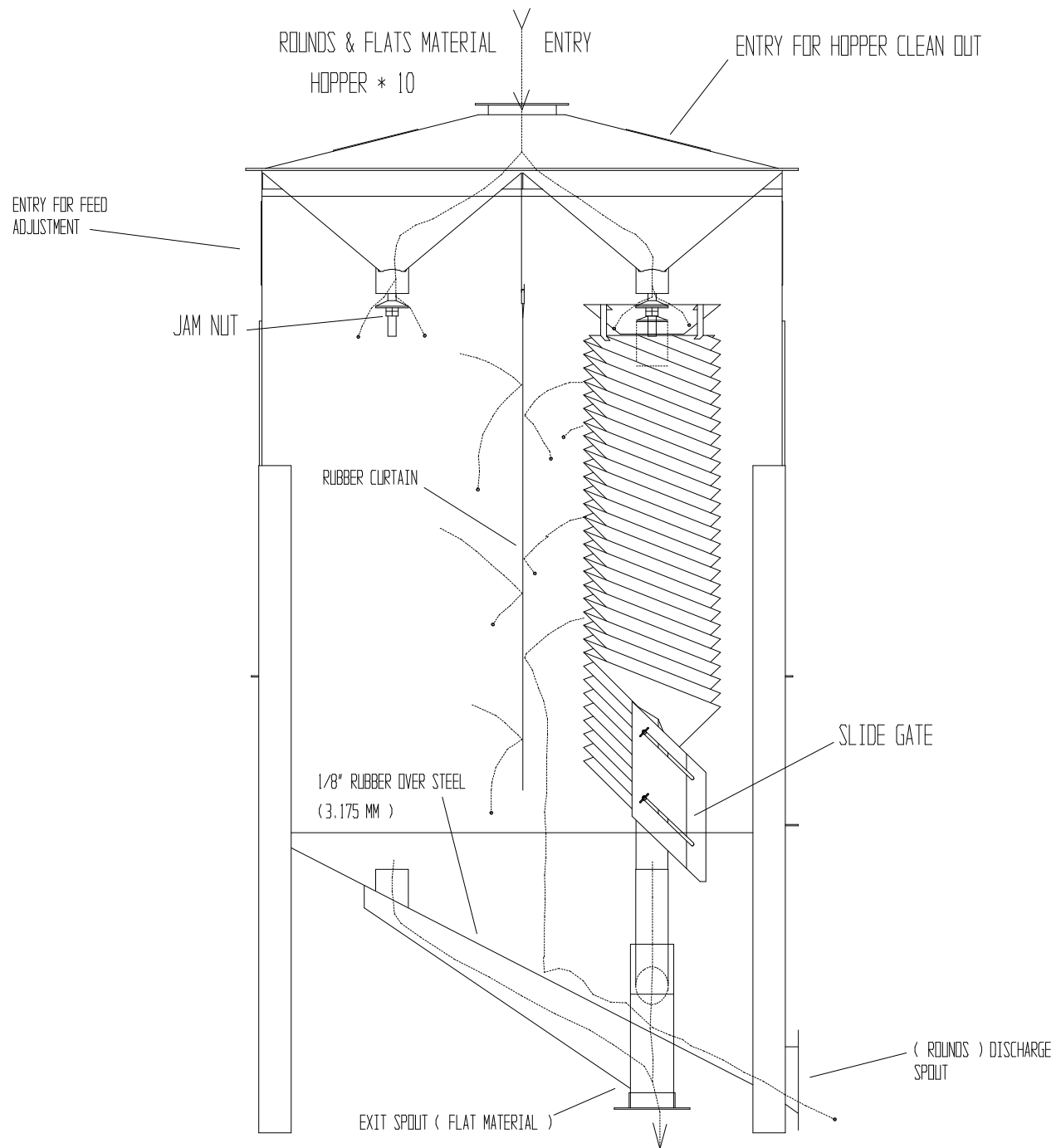


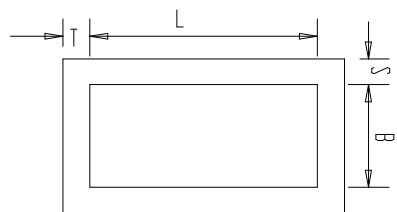
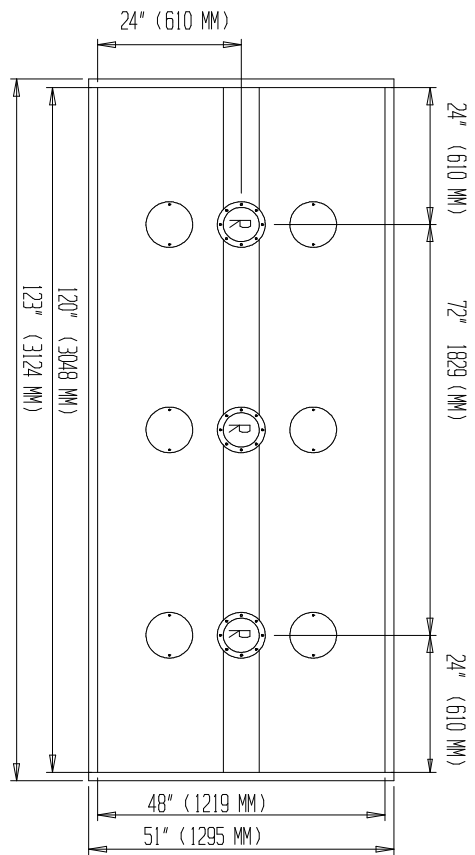
⇒ **High Capacity 500 BPH**

- ♦ Each unit contains (10) independent soldered, galvanized Spiral Core Cartridges with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ♦ Integral self-cleaning hoppers
- ♦ Deflectors included for fine tuning separation
- ♦ Four (6) access doors for easy entrance to internal components
- ♦ Heavy 14 gauge body construction with rubber cushioned seed discharge points
- ♦ Legs 3/16" Flanges 1/8"
- ♦ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 24 gauge Stainless)

⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

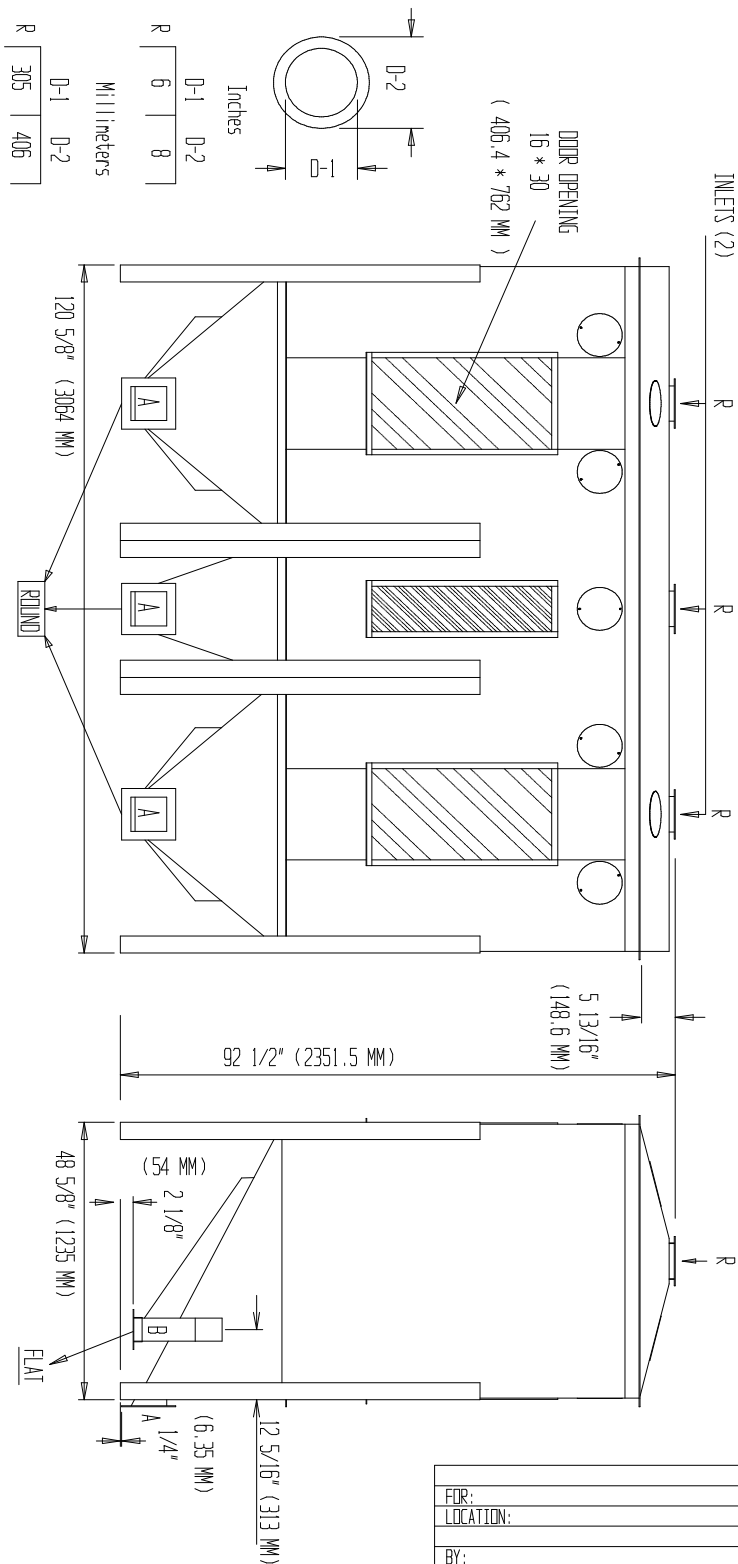
BASIC HT-500 BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)





Inches				
A	L	B	S	T
6	6	1 1/2	1 1/2	1 1/2
B	7 3/4	4	1 1/2	1 1/2

Millimeters				
A	L	B	S	T
152.4	152.4	38.1	38.1	38.1
B	195.8	101.6	38.1	38.1



FOR:	
LOCATION:	
BY:	
DATE:	2005

FOOT PRINT:

DATE:	10 CORE ENCLOSED SPIRAL	Type:	HT-500
Issued by			
page			
	Replaces:	NO.	

**8 CORE
ENCLOSED
“SPIRAL”
SEPARATOR**

**HT - 400
MAGIC BOX**

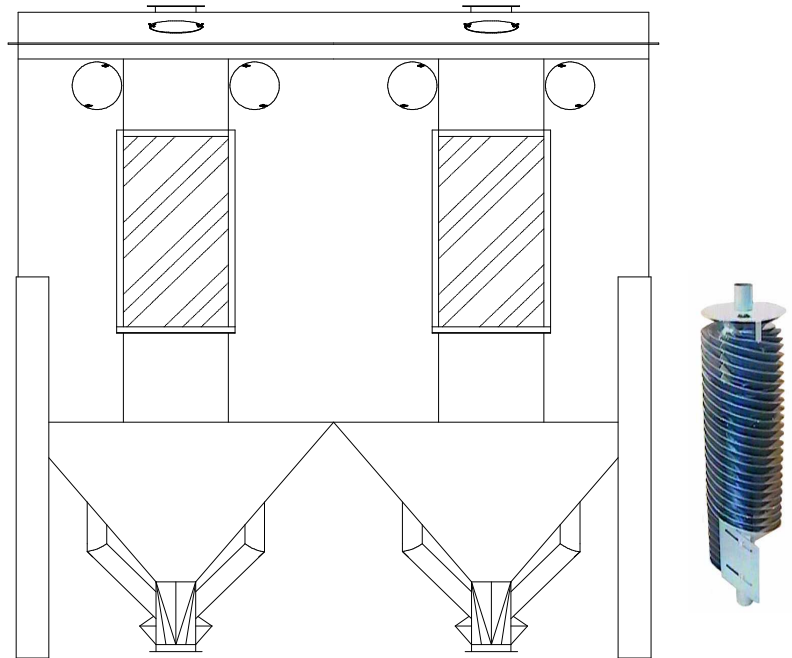


HT-400 MAGIC BOX

Enclosed Spiral Separator

Completely Enclosed For

- ◆ **Dust Control**
- ◆ **Quiet Operation**
- ◆ **Compactness**
- ◆ **Ease of Handling**

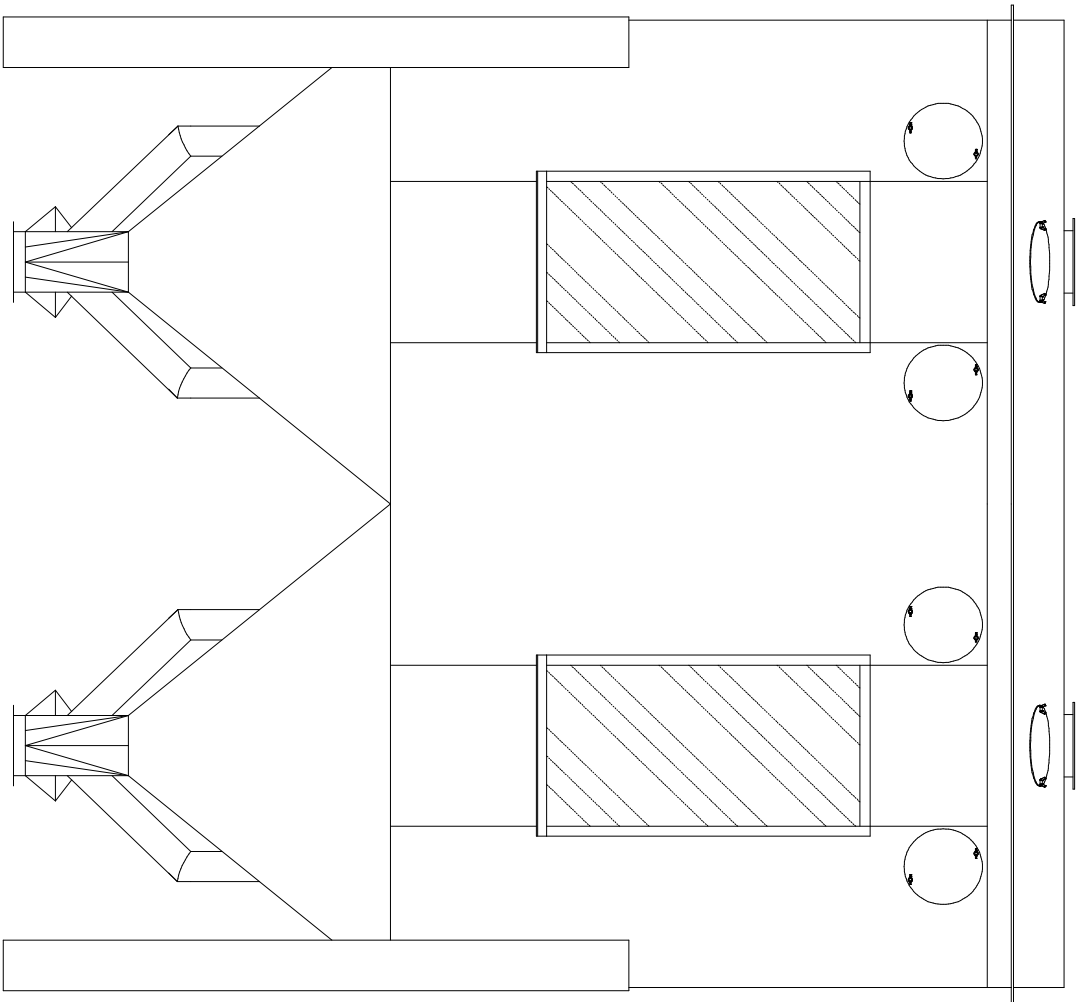


HT-400 MAGIC BOX

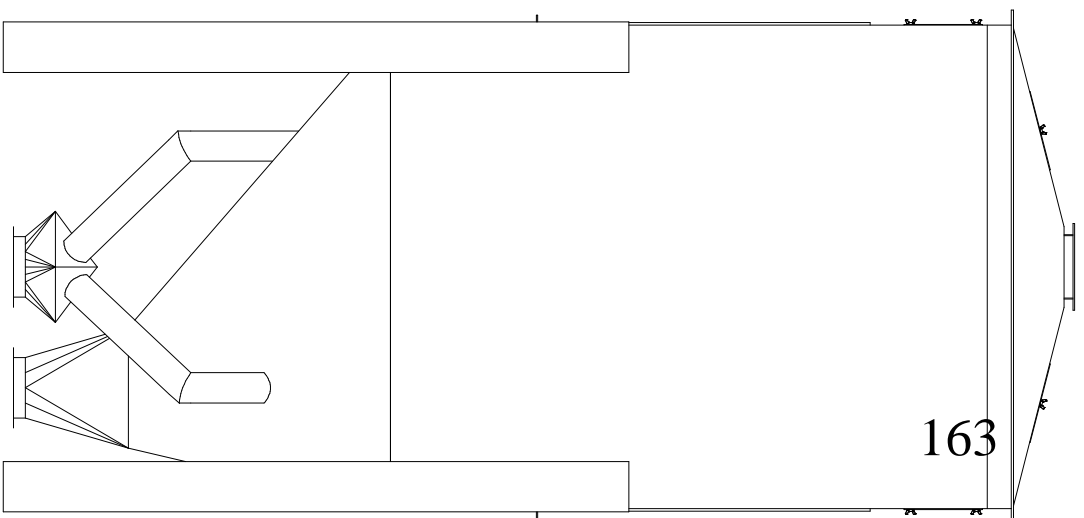
⇒ **High Capacity 400 BPH**

- ◆ Each unit contains (8) independent soldered, galvanized Spiral Core Cartridges with each having infinitely adjustable flow-control (flow control adjustable during operation)
- ◆ Integral self-cleaning hoppers
- ◆ Deflectors included for fine tuning separation
- ◆ Four (4) access doors for easy entrance to internal components
- ◆ Heavy 14 -16 gauge body construction with rubber cushioned seed discharge points
- ◆ Legs 3/16" Flanges 1/8"
- ◆ Different pitched spiral cores offered which are easily installed
(these cores can be furnished in Galvanized metal up to 22 gauge & 26 gauge Stainless)

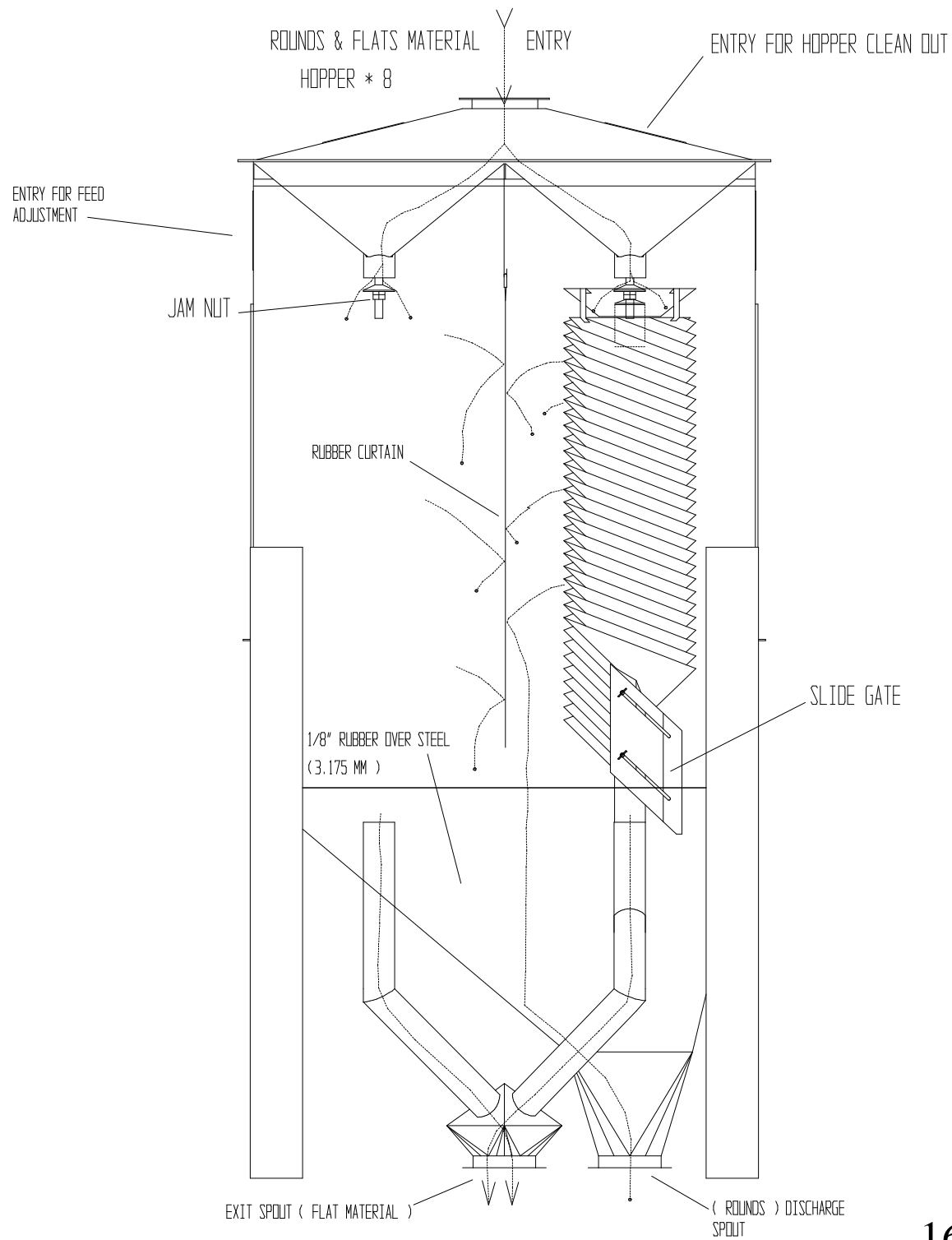
⇒ Figure based on average precleaned soybean seed but may vary depending on precleaning quality, type seed, or required quality of final product.

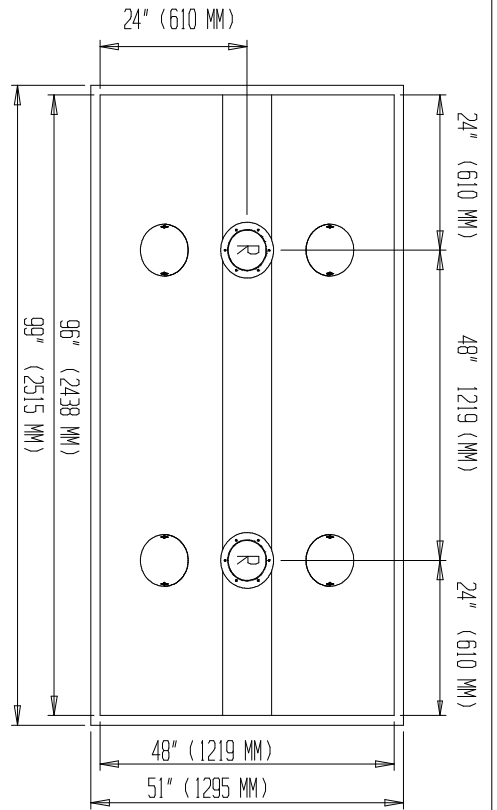


HT400 MAGIC BOX

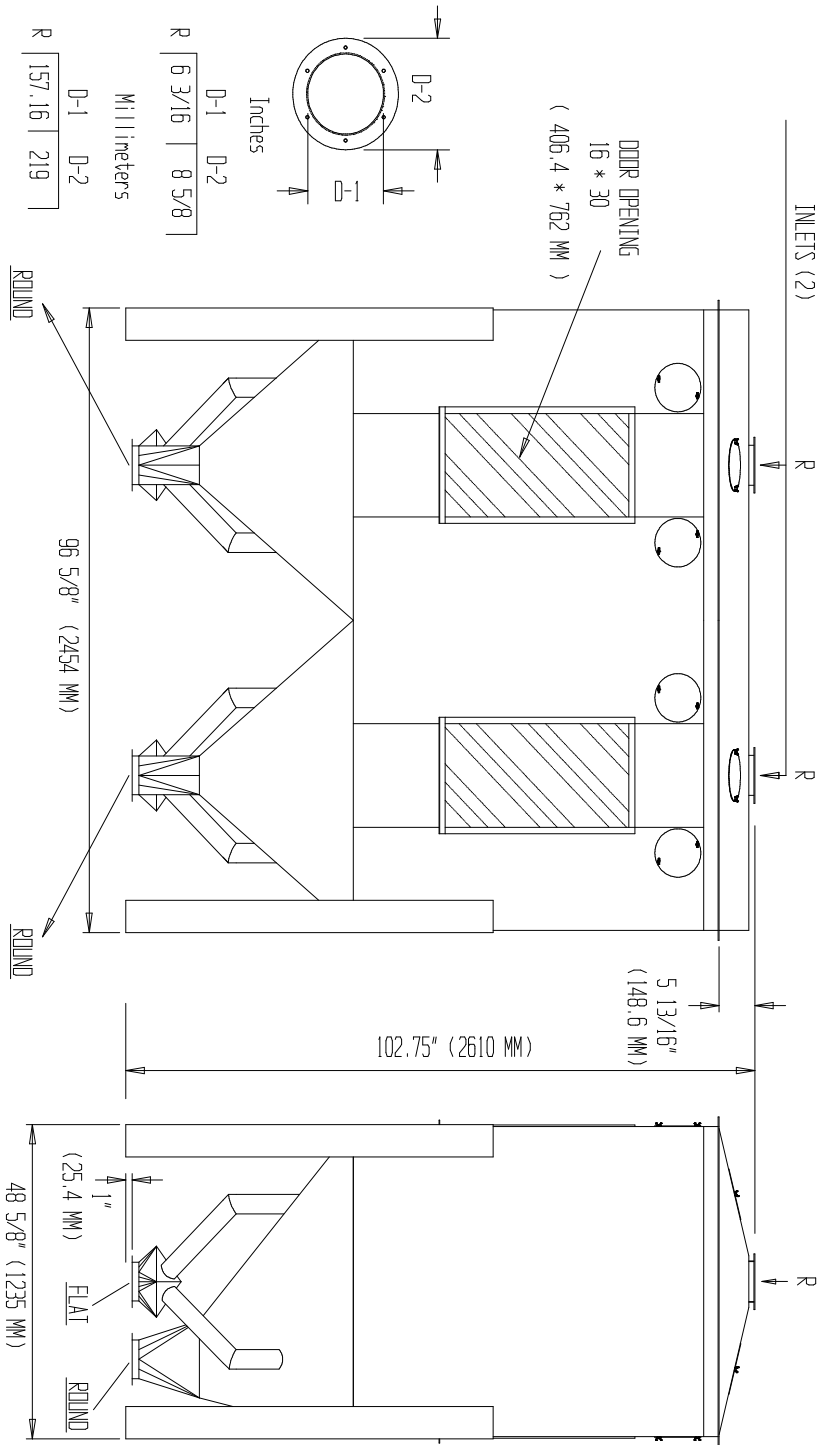


BASIC HT-400 MAGIC BOX TYPE SPIRAL SEPARATOR (MATERIAL PATH)





FOR: SHERYL GIBBONS
LOCATION:
BY: H&T SHEET METAL
DATE: FEB-14- 2007



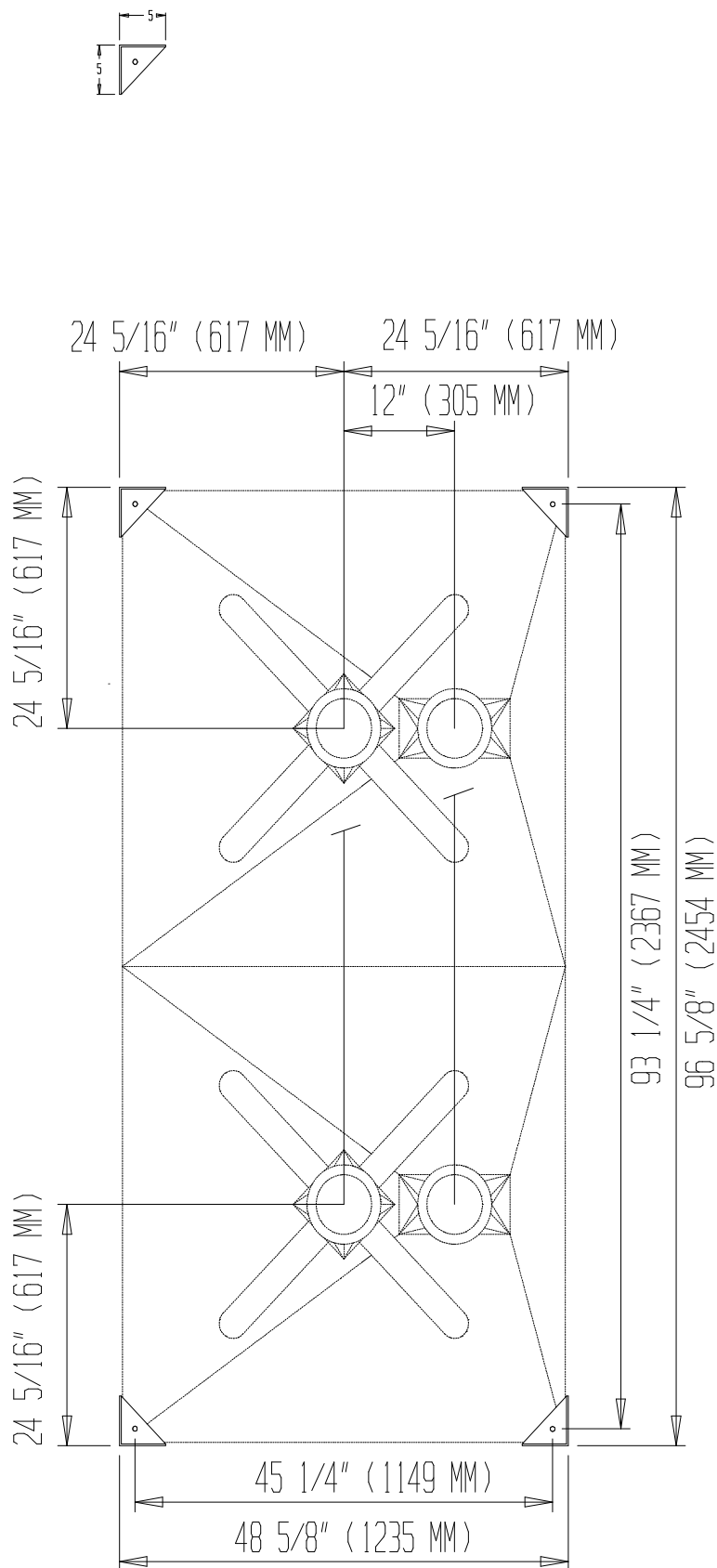
DATE: 2007
Issued by: MT
page:

8 CORE ENCLOSED SPIRAL
" MAGIC BOX "

Type:
HAGAN

Replaces:

165
108-A



TOP - FRONT - SIDE (108-A)

[illegible]