

POSS Design Limited

World Leader in "Quality Separation Solutions"



2940 Portland Drive, Oakville, Ontario Canada L6H 5W8

Turn-Key Separation Solutions

- ◆ **Rugged and Reliable**, No Pre-breakers/ Grinders Required
- ◆ **Biggest: YIELDS**, Processing Volumes, Optimal Texture
- ◆ **Smallest:** Footprint, Horsepower Requirement, Screw RPM & Temperature Rise
- ◆ **Industry Leader** in USDA Ground Turkey, MSC and Boney Trim
- ◆ From 500 to 35,000+ lbs/hr

Let us build one for you!

POSS Design Limited

2940 Portland Drive, Oakville

Ontario Canada L6H 5W8

Ph 905-829-1077 Fax 905-829-3077



Largest - PDX 815

- 150 Hp
- 35,000+ lbs/hr

Smallest - PDE 250

- 7.5 Hp
- 500 lbs/hr

"World Leaders in Quality Separation Solutions"

www.poss-separators.com

Why POSS? Nov 2012

POSS PDDX 2 -10 Dual Stage 20 t/hr Separator



*“Let Us Build
One For YOU!”*

Ken Gulak – President

Werner Poss - Founder

“ Mechanical Separation Solutions ”

POSS Design Limited

“World Leader in Quality Separation Solutions”

We Separate “Soft” from “Hard”, including the following:

- 1. Mechanical Deboning - Chicken / Turkey / Beef / Pork**
- 2. De-sinewing - Single Screw or using the POSS In Line Pump > ‘ILP’
Boneless Turkey Drum, Boneless Beef Shank or Cartilage
Beef / Pork / Chicken or Turkey “Trim” into Ground Product
Various Trims / Grinder Residues - *found money and increased yield!***
- 3. Dual Stage Recovery - 2 streams of recovered meat –
*“skimming the cream off the milk!”***
- 4. Pork Skin / Fat Separation - a true “win / win”**
- 5. Potato Peel / Feather Waste Dewatering- remove the water
mechanically, saving transportation costs by reducing weight by 85+%**

From 500 to 40,000+ lb/hour input capacities

Over 715 Installations in 58 Countries Worldwide!

POSS Design Limited

“World Leader in Quality Separation Solutions”

Over 715 Installations in 58 Countries Worldwide!

From 500 lbs/hr (7.5 hp) to 40,000+ lb/hr (150 hp) input capacities, POSS machines cover the full spectrum of separation applications.

There are more than 715 machines running in more than 58 countries worldwide, with over 185 installations in the USA alone, and more than 50 in each of

- the former East Bloc countries,**
- Asia / Australia / New Zealand**
- Brazil, Argentina, Uruguay, and Chile**

More than 480 machines would be running conventional chicken mechanical deboning. About 85 more are running turkey deboning, primarily making USDA Ground Turkey from bone in turkey drums. Another 30 were sold for beef shank de-sinewing. The remainder are in various niche applications including pork skin de-fatting and boney trim to recover high value coarse ground product.

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Key Points which distinguish POSS Mechanical Separators:

1. YIELD – recover at least 95% of the meat available on Raw Material >> \$\$\$\$
2. “POSS Screen Plate” Separation Head = Better Texture (Perforated Style also available)
3. Low temperature rise during separation - Low Pressure, Low RPM (300), Positive Feed
4. Extremely rugged design and construction = Lowest Cost Operation over the Long Term (Thrust Housing, Belts/Sheaves, 5:1 Gear Box, Long Life of wearing parts)
5. Raw Material input directly into the hopper - no pre-grinder or pumps
6. Hydraulic Auto Restrictor - Unique to POSS - Has added 5 - 9% > Found Money!
7. Versatility of applications - POSS In Line Pump for “Softer” products
10 to 20 ton/hr ‘Monster POSS’ machines for MAJOR labor cost savings!
Dual Stage Separation for a truly “Premium” upgrade of recovered meat
8. Up to 5 Year Warranty Available with Annual Service Contract

POSS
PDX 815

PDX 815

*17-20 tonne / hr
Input Capacity*

150 Hp
113 Kw

With only 250 – 300 rpm, and more than 130 square inches of opening thru 300 x 8" Screens across the head, coupled with the POSS Auto Restrictor and the POSS Quad Pack Thrust Housing Assembly, the POSS PDX 815 recovers Maximum Yields and Optimal Texture with minimum Temperature Rise, day after day, year after year.

POSS

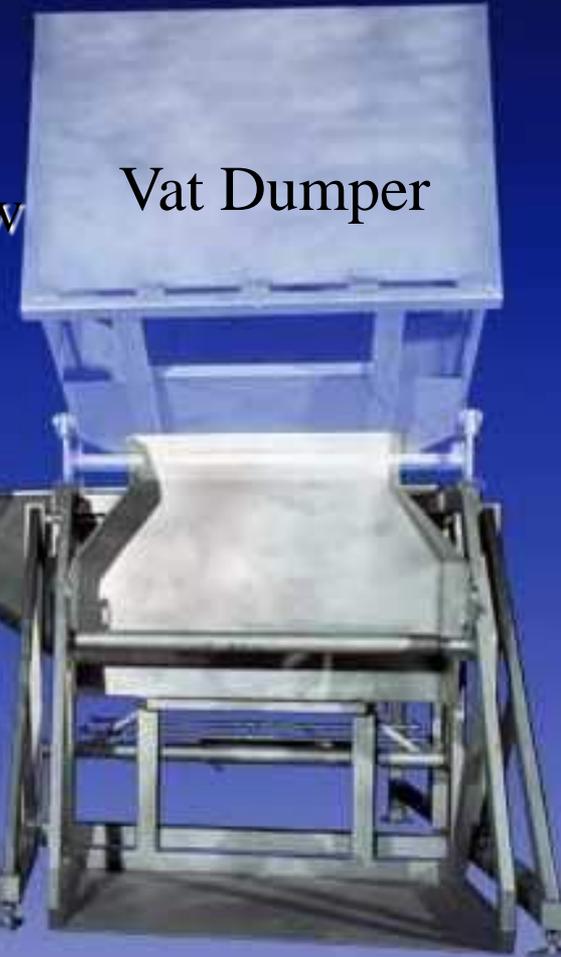
Flat Belt Conveyor
With Metal Detector



Incline Screw
Conveyor



Vat Dumper



Poss PDX 710
10 ton/hr

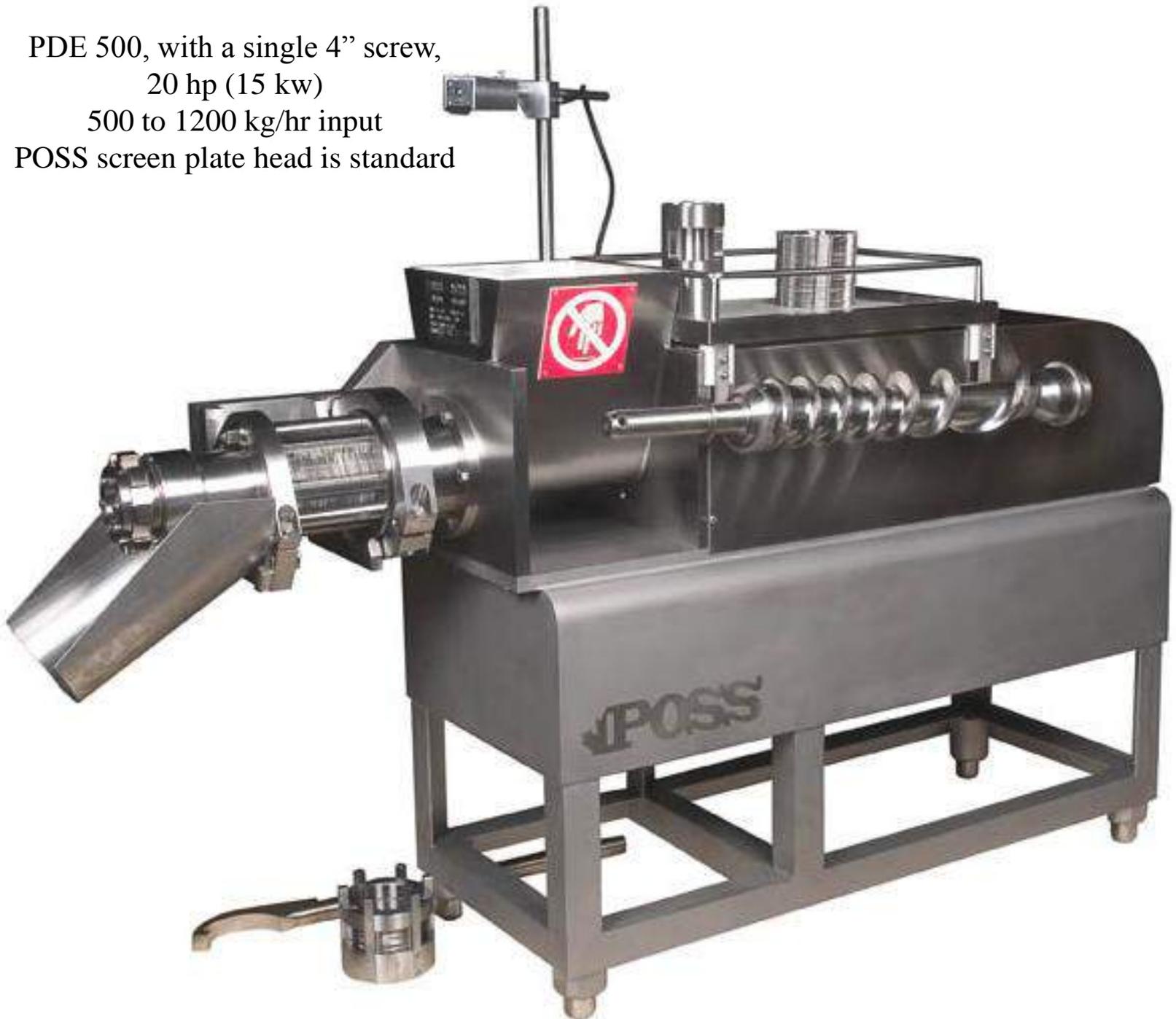


Meat Pump

Full Control Package
Incl Inverter & Level Control

“World Leader in Quality Separation Solutions”
Turnkey Packages – Single Source Responsibility

PDE 500, with a single 4" screw,
20 hp (15 kw)
500 to 1200 kg/hr input
POSS screen plate head is standard



POSS 1500 E Complete



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POSS design
limited

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Why POSS for your Turnkey System?

- 1. Single Party Responsibility, Fully Engineered Solutions**
- 2. Reliable and Rugged, but User-Friendly Design**
- 3. Compact & Custom Designed for your Application and Layout**
- 4. Sanitary, Easy to Clean, All 304 Stainless Steel Design**
- 5. Commercial Components readily available locally**
- 6. Over 40 years of Food Industry Experience ‘*at your service!*’**

"World Leader in Quality Separation Solutions"
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Quality Separation Solutions



PDX 815



DUAL STAGE SEPARATION



PDE 250



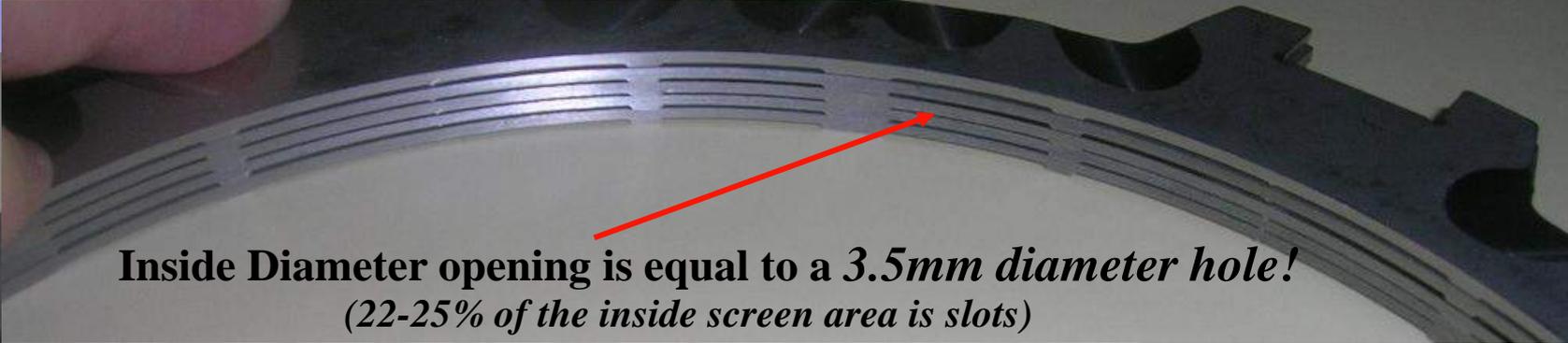
PDE 1500

Patented POSS

Screen Plates:

Up to 4 times as much opening for meat recovery, compared with drilled screens, minimizing temperature rise and retaining the binding properties of the meat.

Available in 4", 5", 6", 7", and 8" diameter

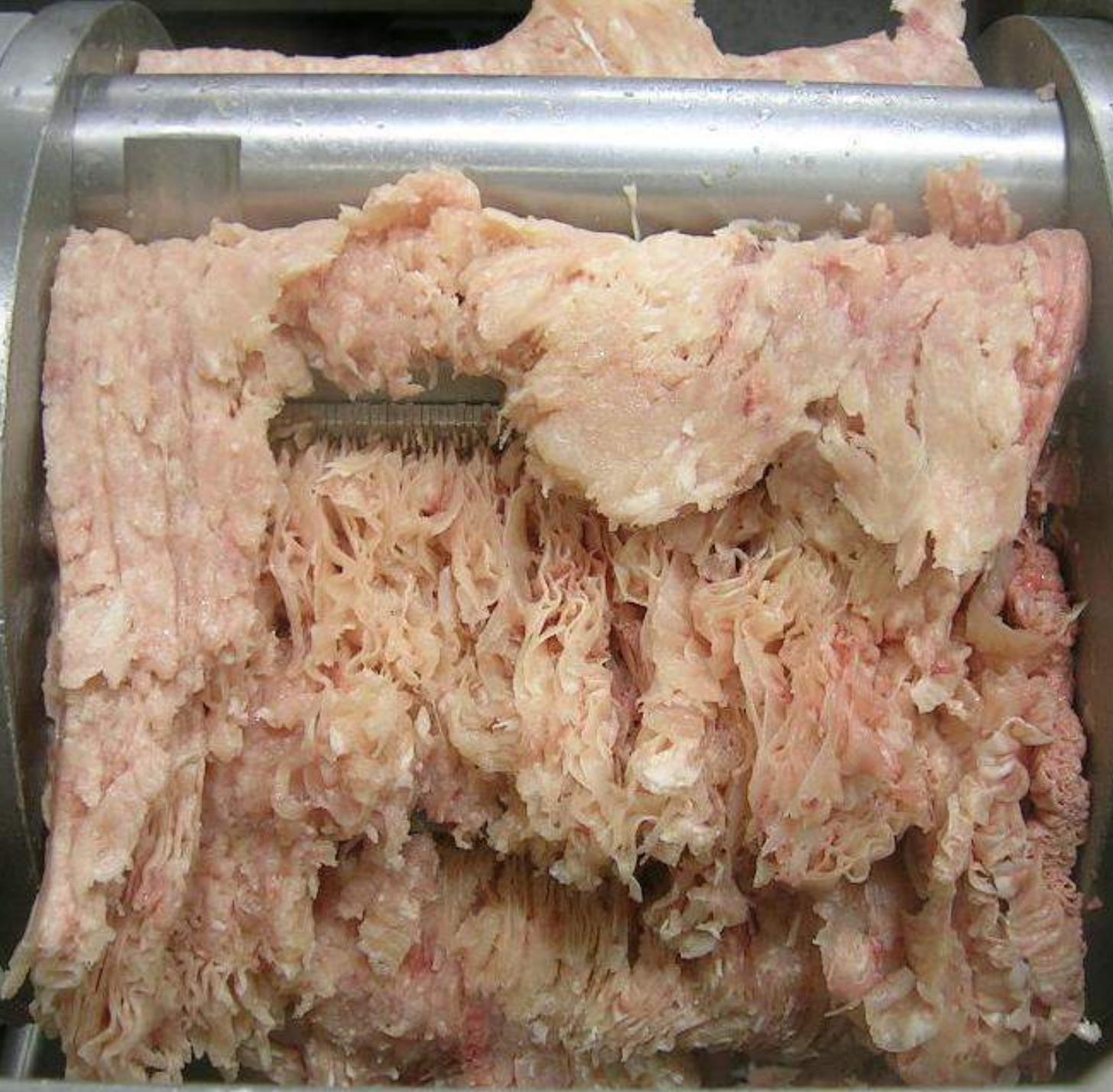


Inside Diameter opening is equal to a 3.5mm diameter hole!
(22-25% of the inside screen area is slots)



Outside Diameter opening is equal to a 5 mm diameter hole!

**= Low Temp Rise
& Maximum
Texture!**



**POSS
Patented
Screen
Plate
Texture
Results in**

Highest Yield

Best Texture

*Lowest Temperature
Rise*

Lowest Bone/Calcium

*Maximum Binding
and Moisture Pickup*

*Truly a “Premium”
Ground Product from
‘bone in’ raw
material!*

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Case Study – US Client’s change out from 4 x Prince Separators to one POSS PDX 815 in Apr 2008

1. YIELD – previously were averaging 62% >>>> *now 76 – 78% on 350,000 + lbs/day this 15% YIELD increase means more than \$10,000 /day of additional revenue*
2. Temperature Rise – had been 28 – 34 F with the Prince System >>>>> *now just 6 – 8 F*
3. Through put / hr – previously had 24,000 input lbs through 4 grinders feeding to 4 Prince Separators, (more than 650 hp) >>>>>>> *they are now running 38,000 – 40,000 lbs/hr input through ONE POSS PDX 815 with a single 150 hp motor*
4. Setup time and floor space – the POSS system is using perhaps half the space that the previous system required. And with the automated infeed system, Perdue has the ability to custom blend up to 3 separate inputs to optimize the fat levels in the recovered MDM.

This is typical of what any number of high volume poultry plants could expect to see by consolidating their through-put into one large “Monster” POSS Separator.

Case Study – US Client’s change out to the New POSS PDX 815 in Apr 2008

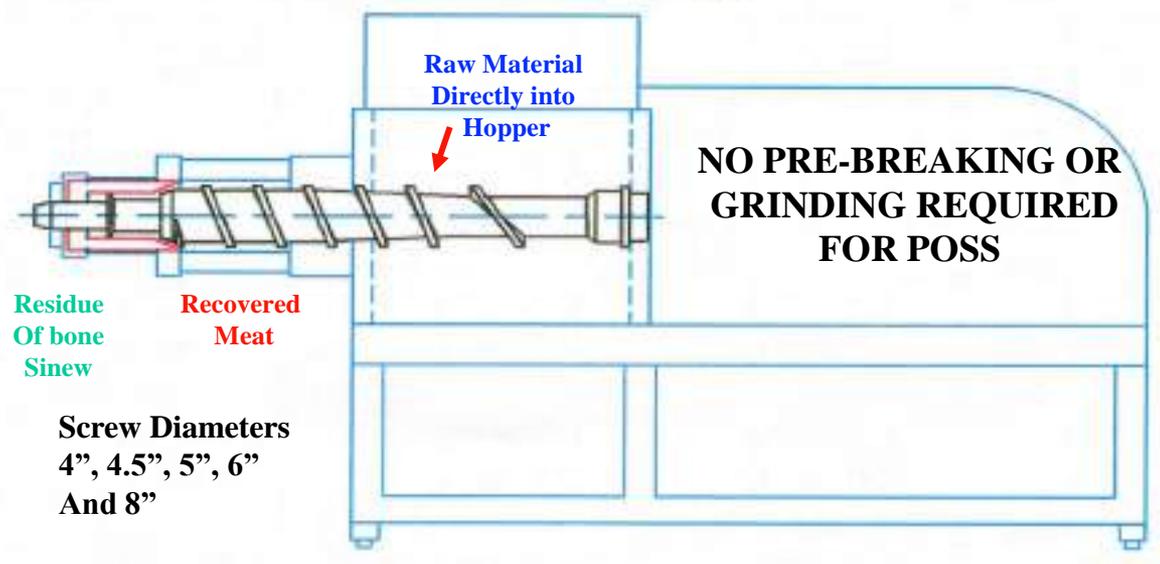


POSS Separators

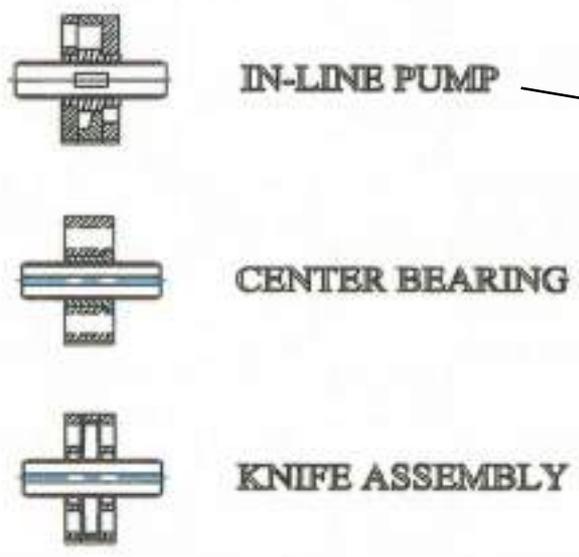
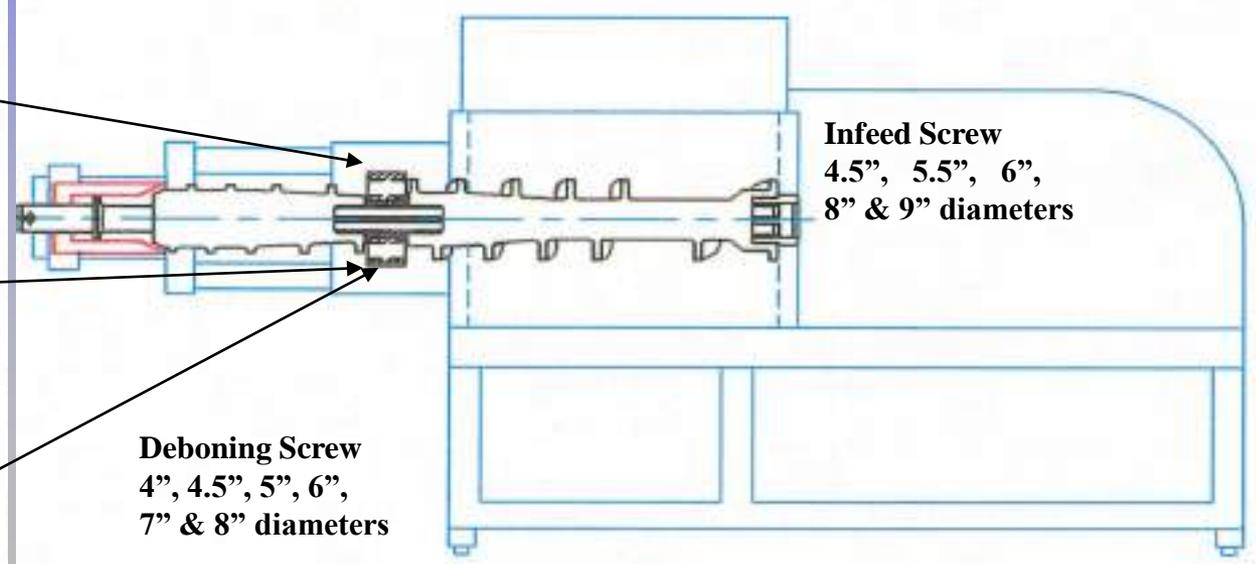
2 Basic Machine Styles:

1. Single Screw
2. Two Screw with one of Three Options

SINGLE SCREW MACHINE



TWO SCREW MACHINE



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On the 2 Screw machines, there are 3 options available:

In Line Pump

*For Softer Products such as
Bony Trim & Grinder Residue*

Center Bearing

*Chicken or Turkey carcass
Necks, Backs or Wings*

Knife Assembly

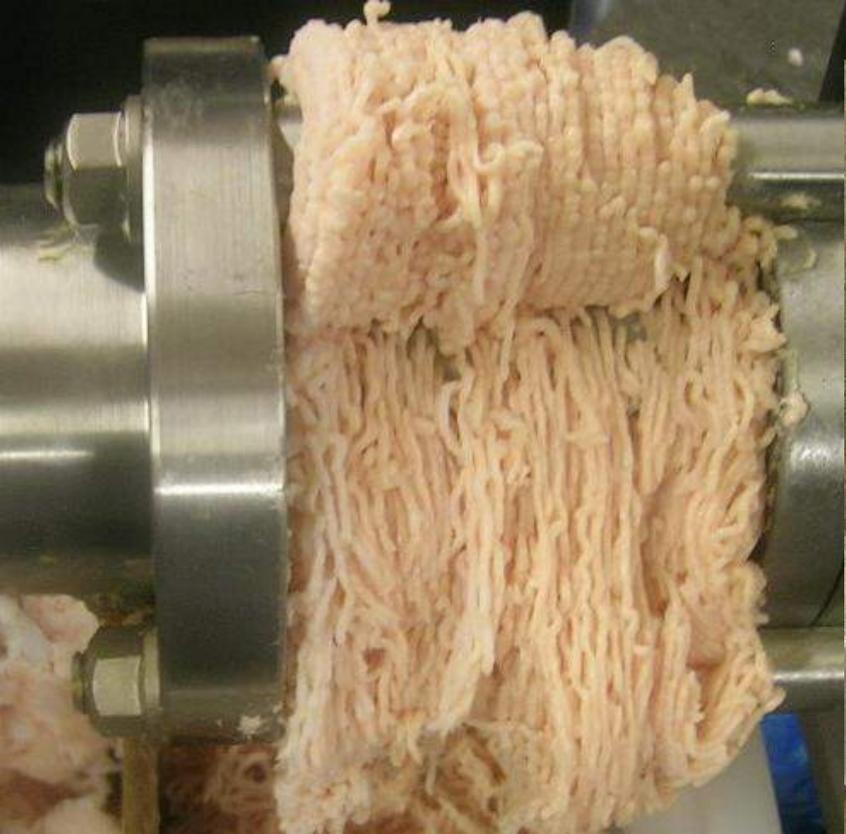
*for Bone In Turkey Drums
or Beef, Pork or Duck*

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www.poss-separators.com

Bony Chicken or Turkey Trim

Run using a POSS In Line
Pump (ILP) between the In-feed
And Separation Augers to make
A Premium “Ground” Product`



Current POSS Applications

1. Chicken

Standard Deboning (MDM) 70-80% yields

Soft Separation / Dual Stage – Coarse Ground – 30-40% yields

Bony Trim – Coarse Ground – 90-95% yields

Keel / Breast Meat Separation- 50/50

Single Screw & Extra Coarse Plates S6S – Coarse Ground from
Whole Muscle Input (Spent Hens/Layers, Whole Legs)

2. Turkey

Standard Deboning (MDM) 70-80% yields

Soft Separation – Coarse Ground – 30-40% yields

Bony Trim – Coarse Ground – 90-95% yields

Extra Coarse Plates – Coarse Ground from Whole Muscle Input

3. Pork

Bony Trim – Coarse Ground with Dual Zone Inline Pump– 75+% yields

Pork Skin De-Fatting – Single Pass or Dual Stage / Gelatin

Back/Neck and Rib Deboning

4. Beef

Beef Shank Desinewing

Rib tip / trachea cartilage Separation

Back / Neck and Rib Deboning

5. Dewatering Peel Waste (potato or any vegetable) to lower transport costs

6. Fish

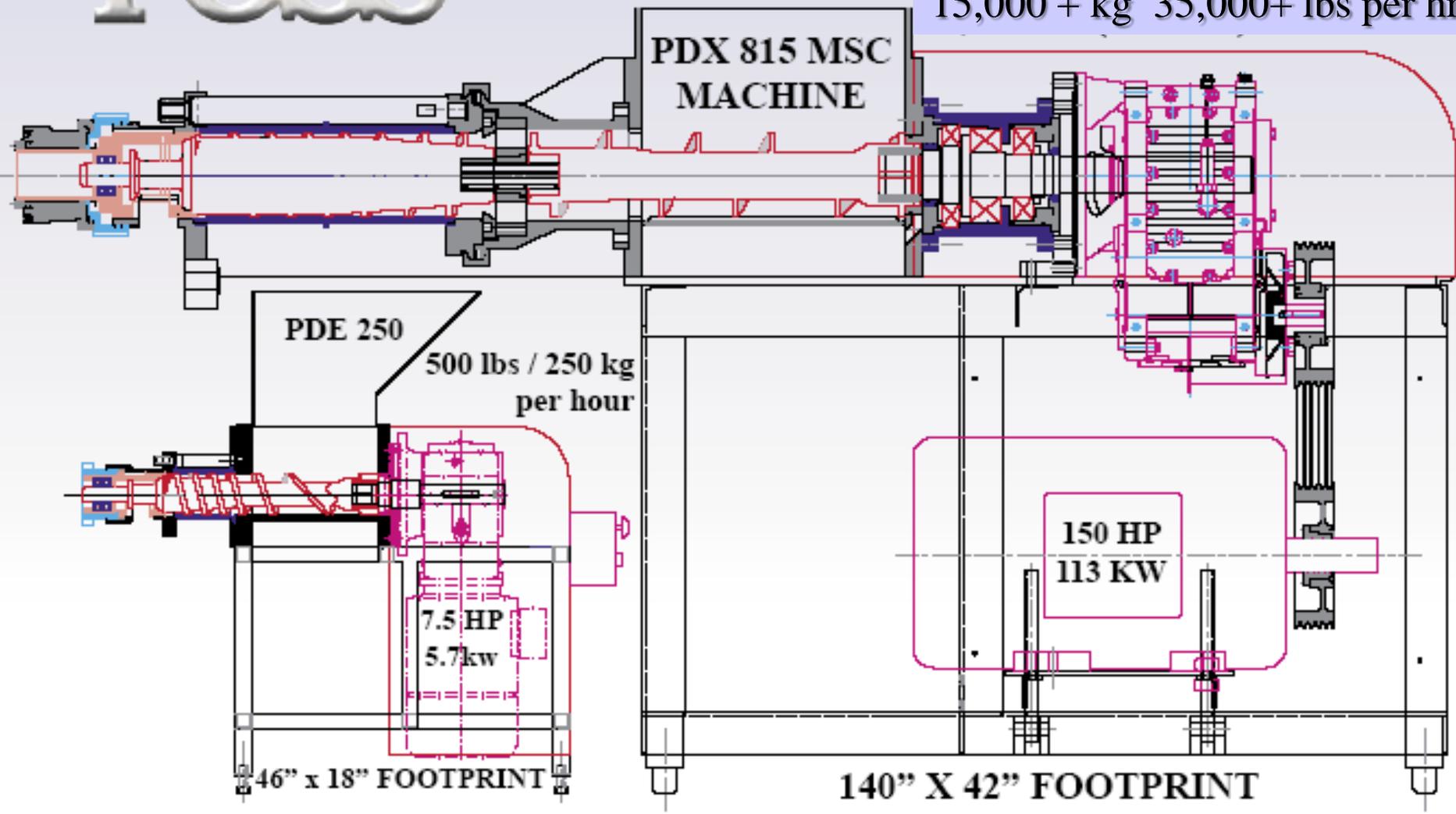
High Volume (20+ tonne/hr / edible or pet food)

NEW FROM
POSS

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15,000 + kg 35,000+ lbs per hr

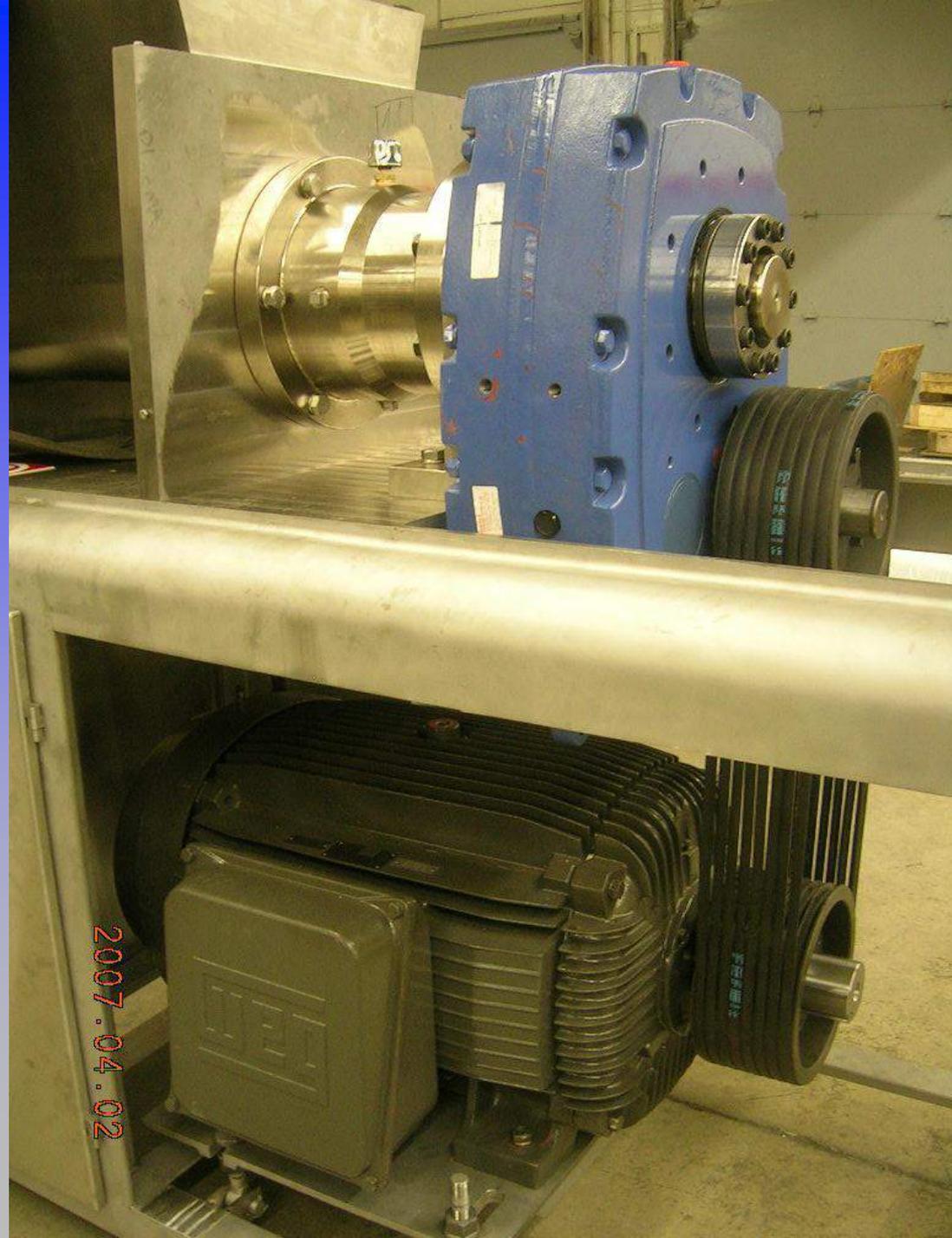


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*“World Leader in Quality
Separation Solutions”*

What goes into *your* POSS?

- Heavy Duty WEG Motor**
- + Belt and Sheave Drive**
- + 5: 1 Sumitomo Gearbox**
- + Unparalleled reliability of
The POSS Quad Pack
Thrust Housing**
results in
- = Low screw RPM (250-300)**
- = Low Temperature Rise**
- = Maximum Yield with the
POSS Auto Restrictor**

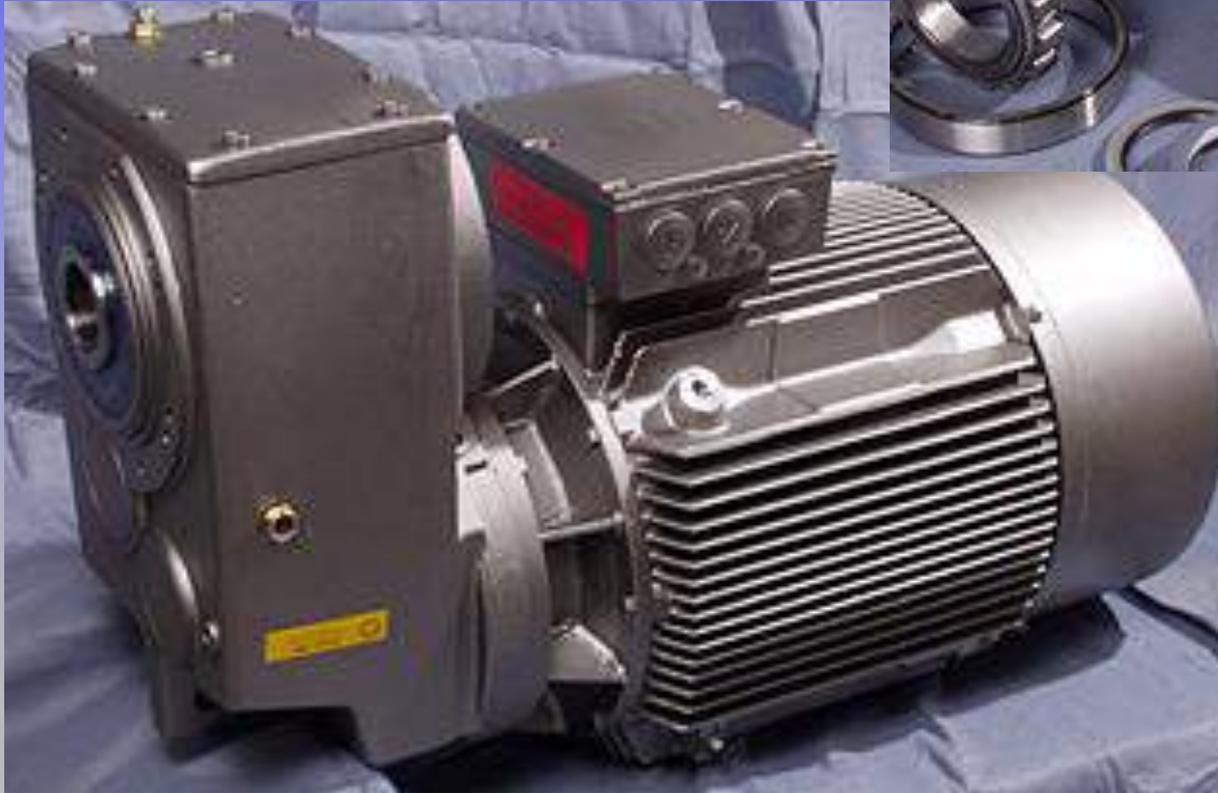


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*“World Leader in Quality
Separation Solutions”*

What goes into *your* POSS?

**Heavy Duty,
“Quad Pack”
Thrust Bearing
Assembly**



**Heavy Duty,
High Efficiency Drives
WEG / NORD / SEW
into a 5 : 1 Gearbox**

*Proof that you REALLY DO
get what you pay for!*

POSS Hydraulic Auto Restrictor Package

for Models PDE 2500 and
larger

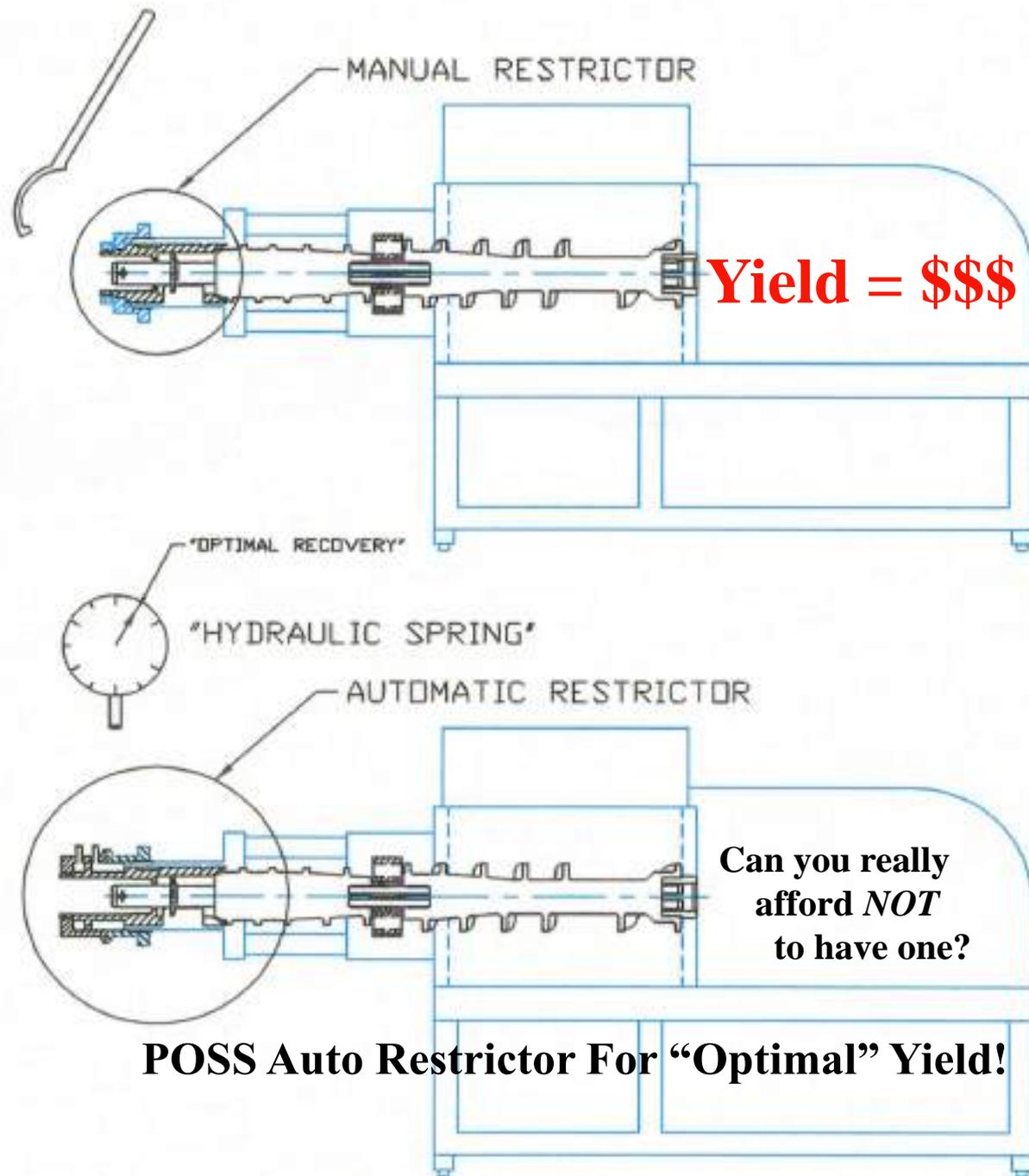
Controls:

- *Bone Count*
- *Consistency*
- *Ensures Optimal Yield*

Can you really
afford *NOT*
to have one?

*Are YOU
getting enough?*

POSS Auto Restrictor For "Optimal" Yield!



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Why Rework?

To ensure:

Optimal Yields

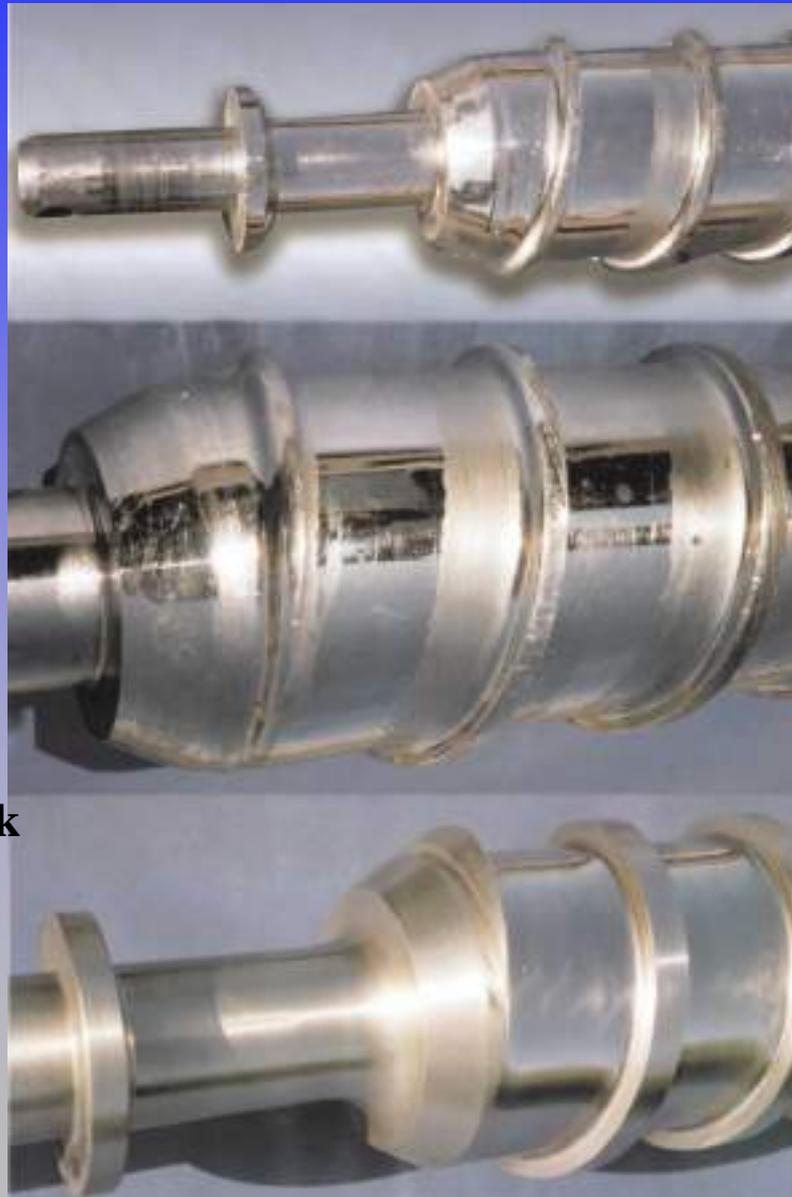
Minimize

Temperature Rise

Maximize

Throughput

Optimal Texture



Worn Bearing Surface

**Worn Taper and
Leading Edge of Flight**

**Reworked Screw: 1/2" thick
flights with square 90
degree corners,
reworked bearing surface
and taper**

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**Newly Reworked Restrictor Body,
with re-cut Friction Grooves &
smooth, even taper.**



**Why
Rework?**



**Worn Restrictor Body,
Friction Grooves worn out,
taper rough, overall length may be too short.**

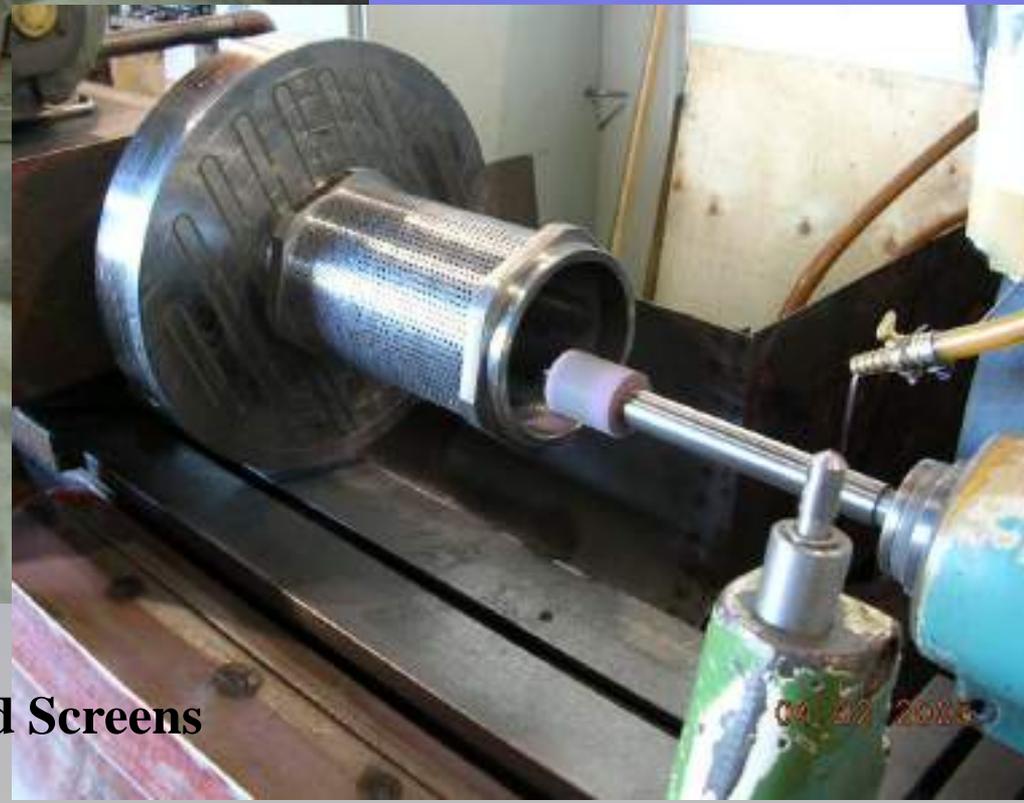
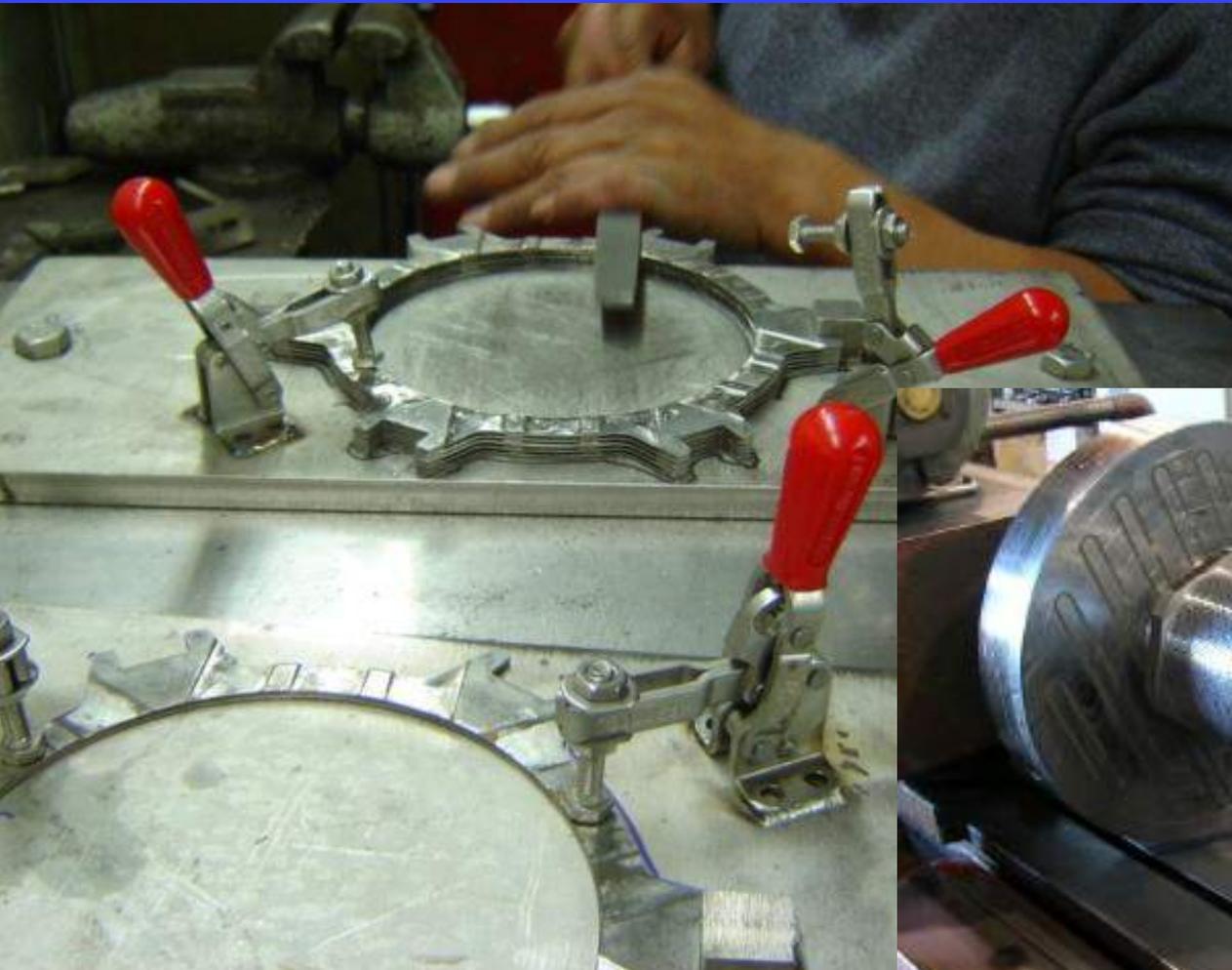
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Why

Rework?

For Consistently
High Quality
Recovered Meat, with
Minimal Temp Rise and
Maximum Texture



**Filing POSS Screen Plate Burrs
& Grinding the ID on Perforated Screens**

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POSS CCM 2000 D
set up for
Beef Shank Desinewing

Screen :

- 3/4 -8mm holes
 - 1/4 - 3 mm holes
- Yield is 95%+**



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“World Leader in Quality Separation Solutions”

*For Keel Bone Cartilage / Ground Breast Meat Separation
Approximately 50 / 50 separation of*

Clean, Chopped Keel Cartilage & Pure Ground Breast Meat



*High Value
Keel Cartilage
For Pharmaceutical
Applications
Approx. \$0.45 / lb
Or \$1.00 + /kg*

2007.02.13

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Beef / Pork Cartilage / Trachea or Keel Bones



Flow the softer
Meat, Fat
& other
tissues off
here

And be left
with only
clean
cartilage



**Cartilage from
Beef or Pork
Trachea
Or
Chicken
Keel Bones**

*Separation of Fat from Pork Skin for
Collagen Recovery and Edible Lard*



Pork Fat and Skin:
Ham, Shoulder,
Jowl and Picnic
Trimmings

Directly into the
POSS Hopper>>



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“World Leader in Quality Separation Solutions”

<<Fat Separation – Increased Fat Yields, making a product suitable for Sausage Making or Edible Lard
And >>>Clean, Fat Free Skin, Chopped into 1”–2”
pieces, ready to make Gelatin or Collagen casings for
sausage

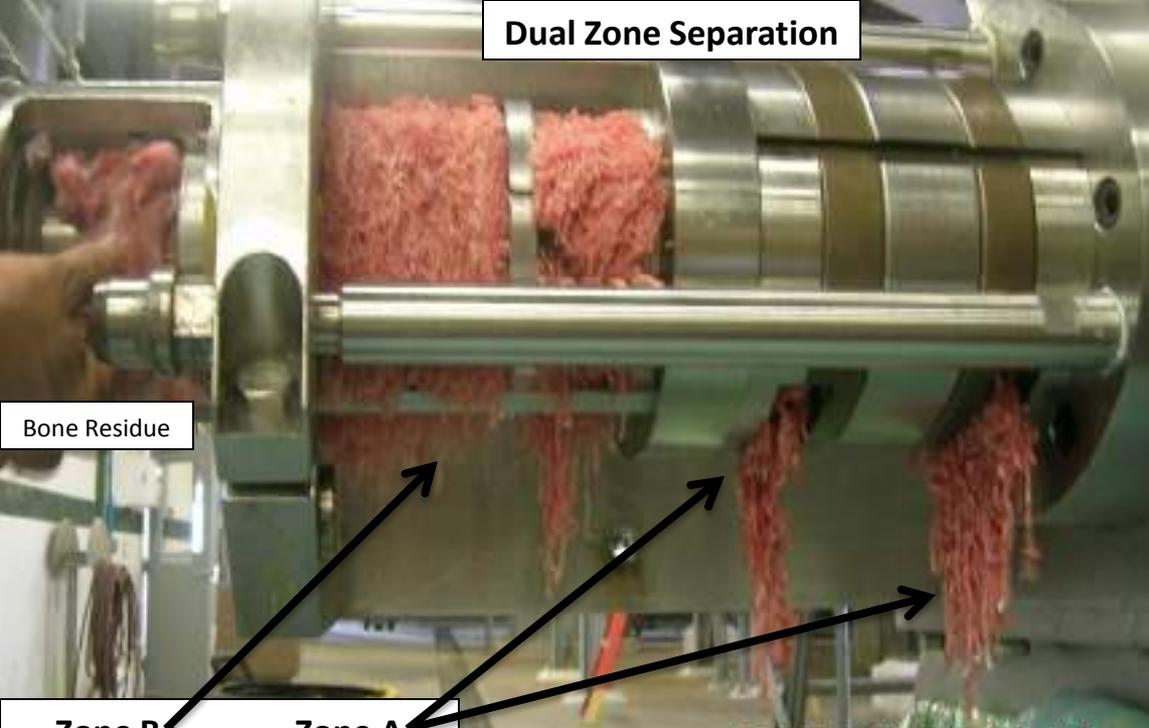


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Processing Pork “soft bones & trim” – loin trim, button bones, pin bones, chime bones, soft pork deboning



normally run on a belt & drum style separator

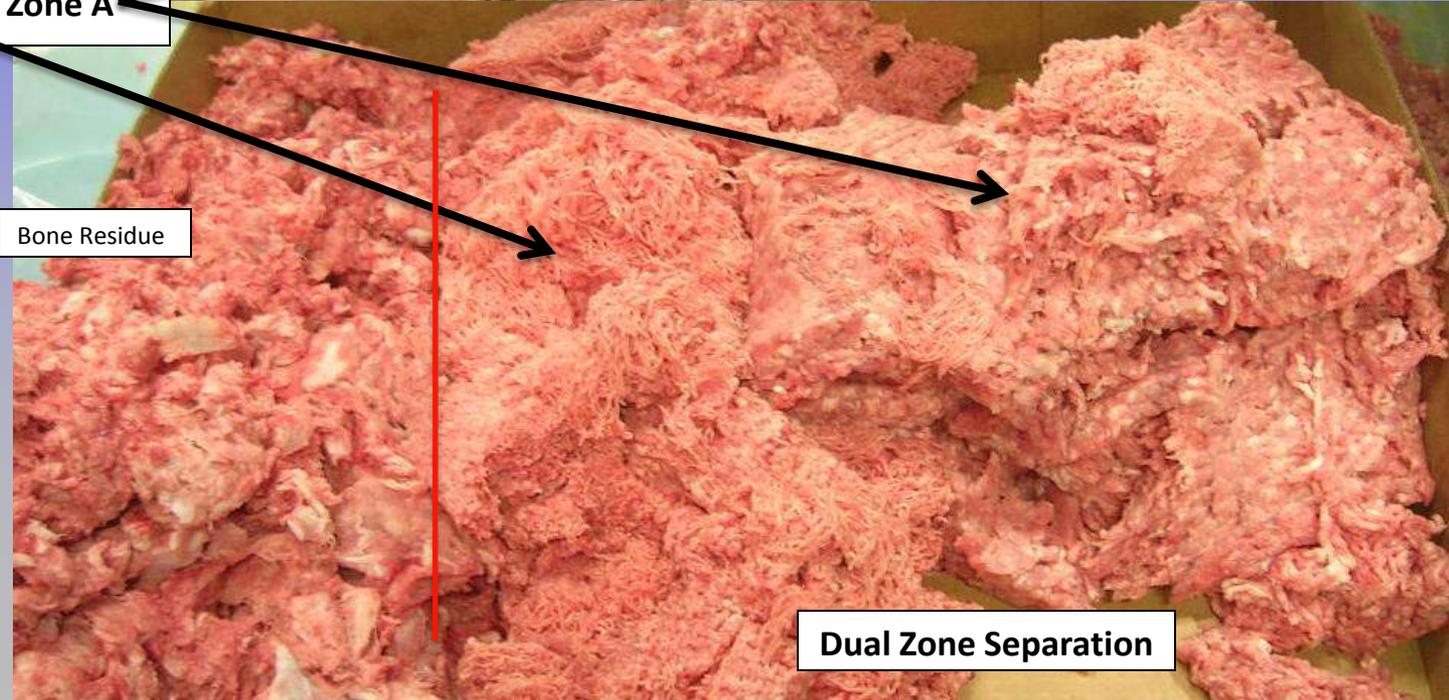


Dual Zone Separation

Bone Residue

Zone B

Zone A



Bone Residue

Dual Zone Separation

POSS Design Limited

Higher Yields
Low Calcium

(less than half of allowable spec!)

No Costly Belts to Replace
Premium Coarse Ground
Texture

Unique 'DUAL STAGE' Separator

Primary Input Hopper

Secondary Input Hopper

**2nd Stage POSS Screen
Plate Textured Recovery**

**1st Stage Coarse Ground
3 mm Meat**

POSS Dual Stage Recovery – *“Skimming the Cream off the Milk”*

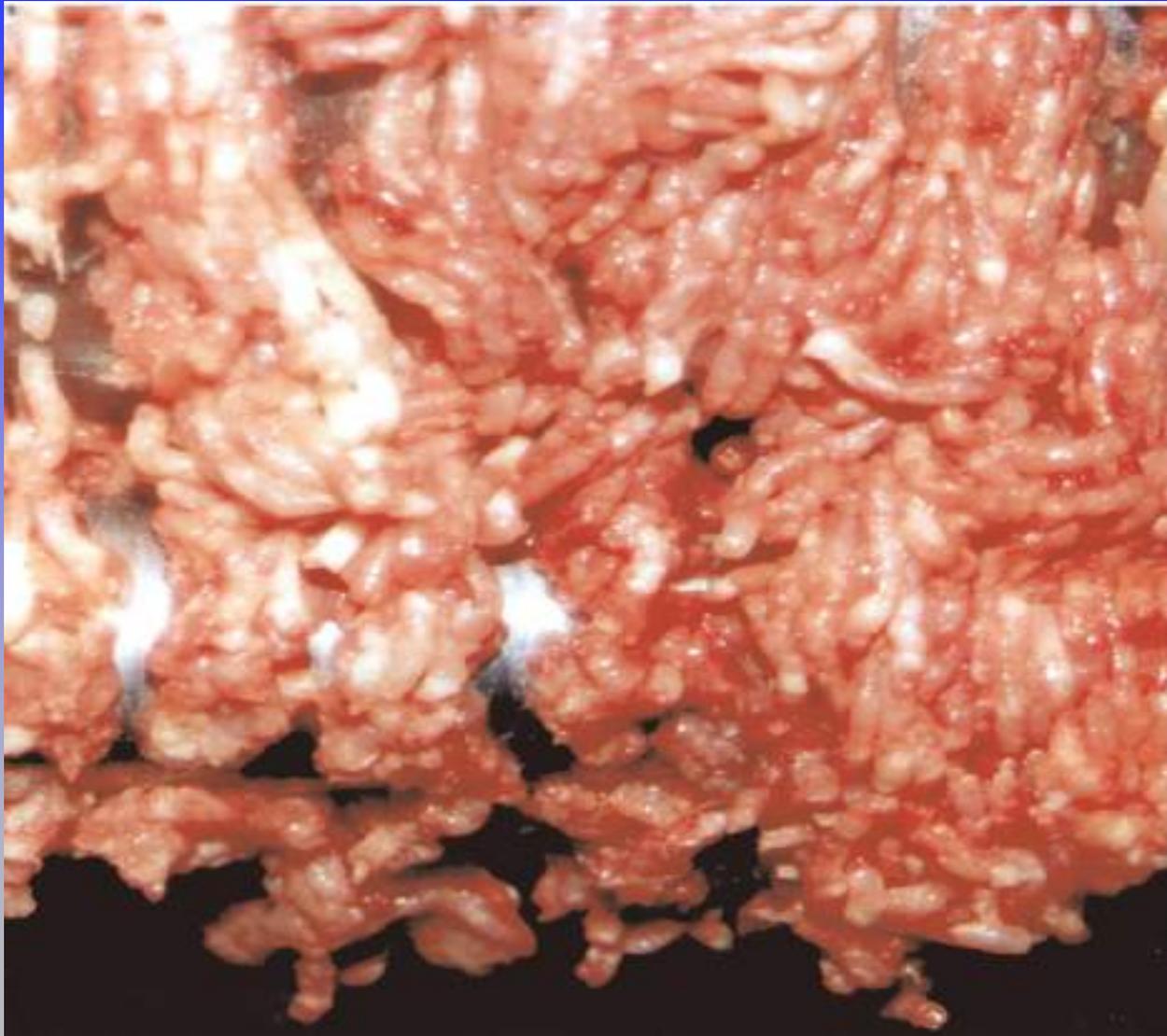
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“World Leader in Quality Separation Solutions”

**A “Premium”
Ingredient for
Further
Processed
Products,**

Or

**added back
to upgrade the
MDM**



First Stage “Coarse / 3 mm” Recovery

POSS PDE 1500 Dual Stage

Turn-Key Package

POSS Level Control Eyes/ Mirrors

POSS Dual Stage Control Panel

Fortress Metal Detector

Dual Lane Variable Speed Infeed Conveyors

Parts Rack for Wash-down and Assembly

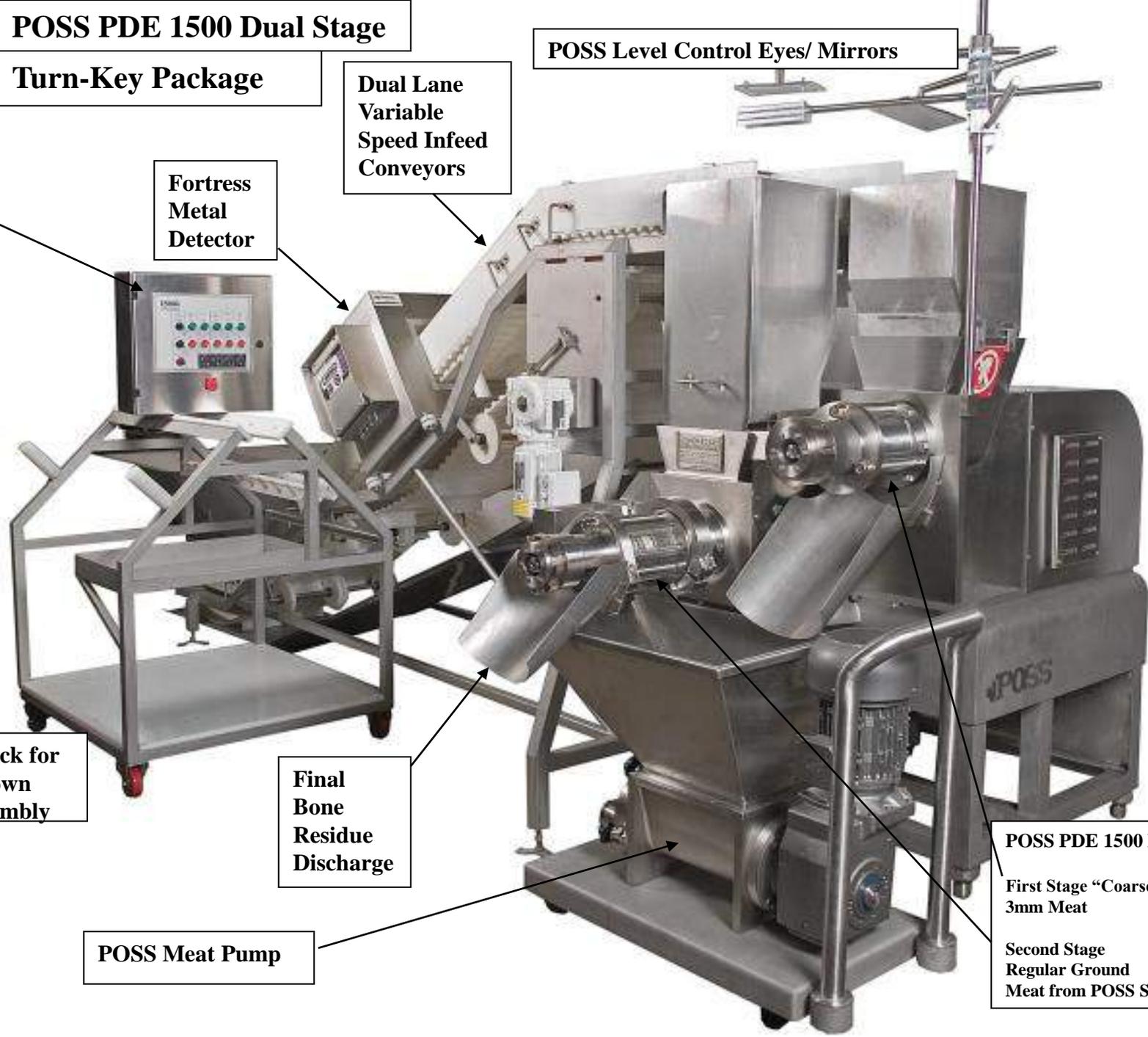
Final Bone Residue Discharge

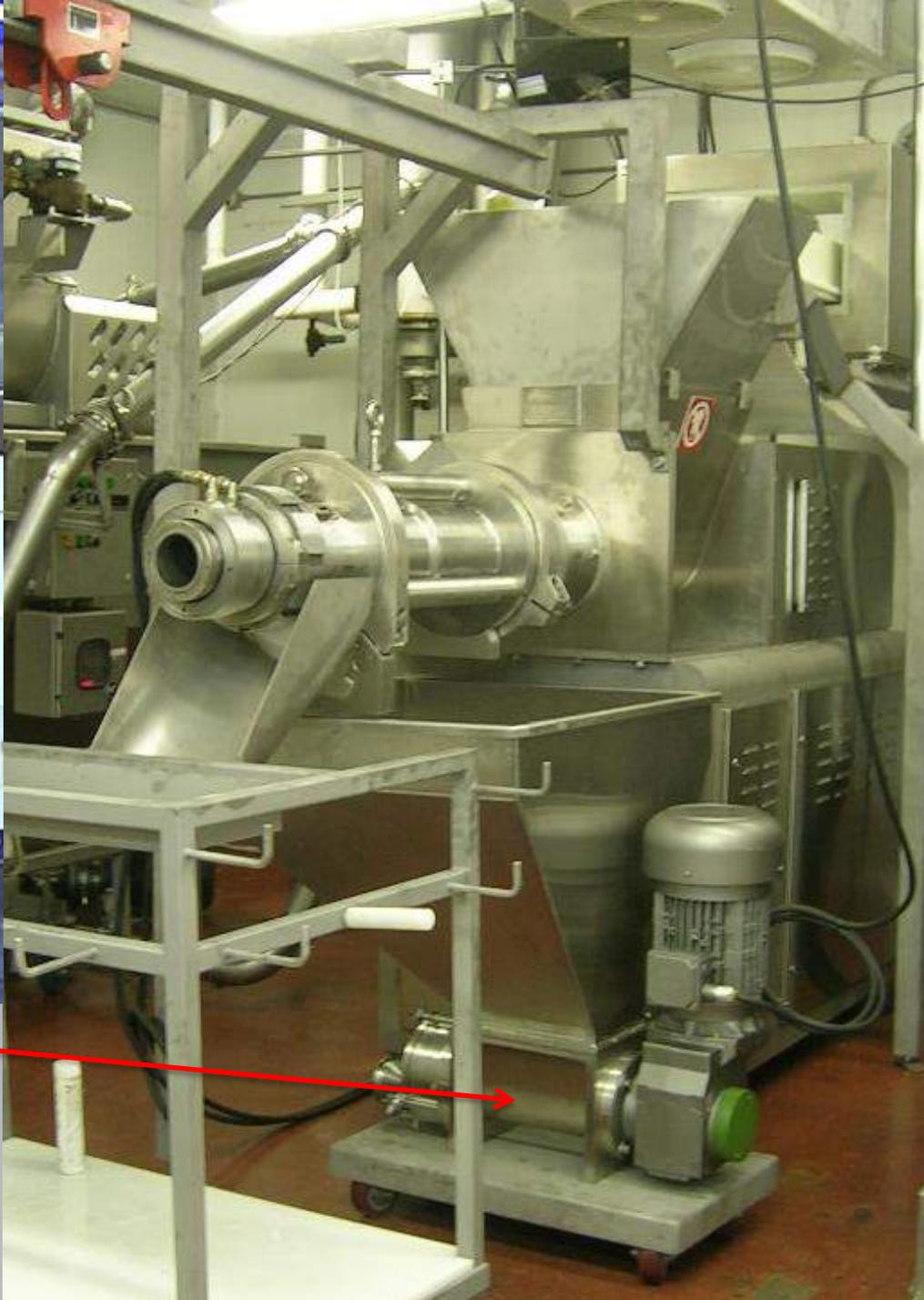
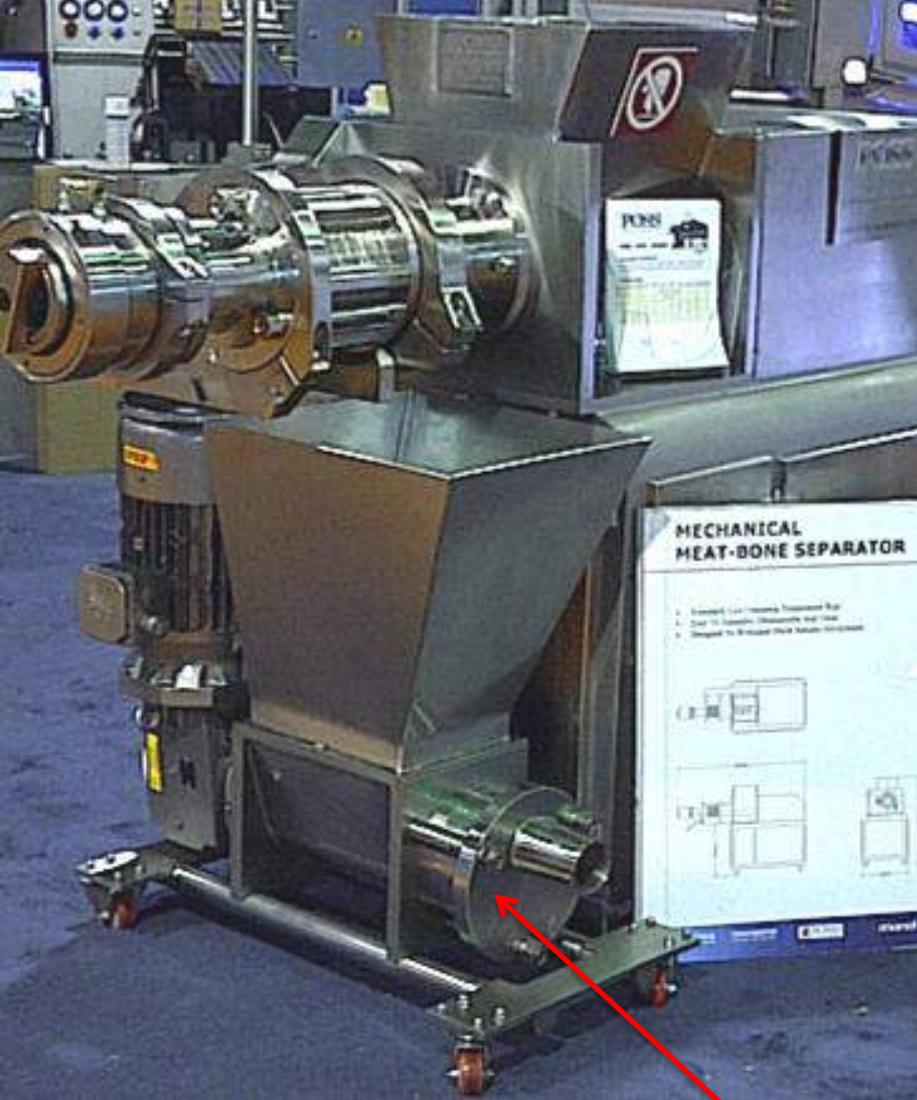
POSS Meat Pump

POSS PDE 1500 Dual Stage

First Stage "Coarse Ground" 3mm Meat

Second Stage Regular Ground Meat from POSS Screen Plates





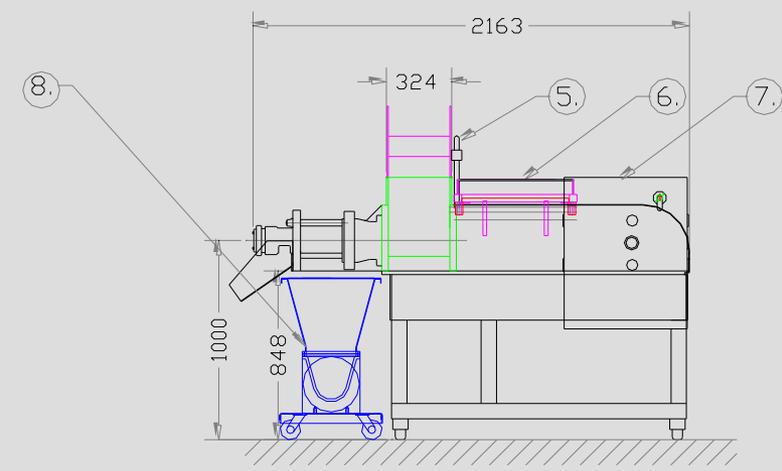
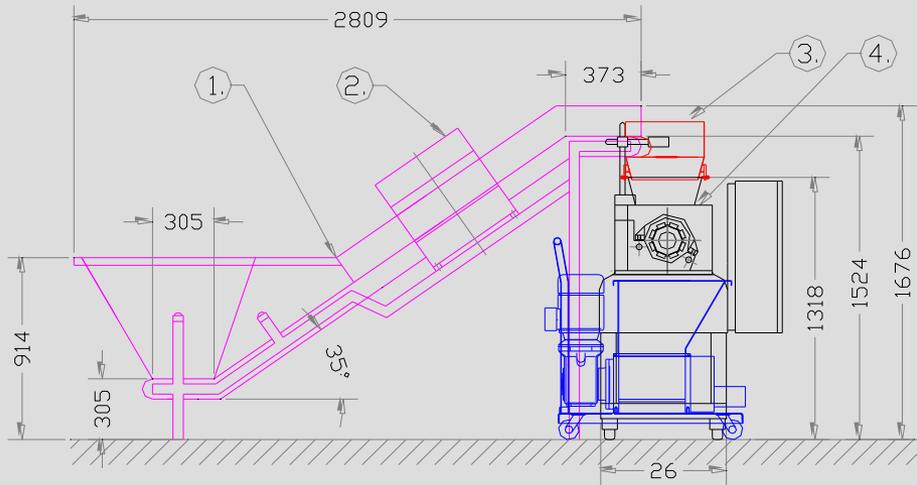
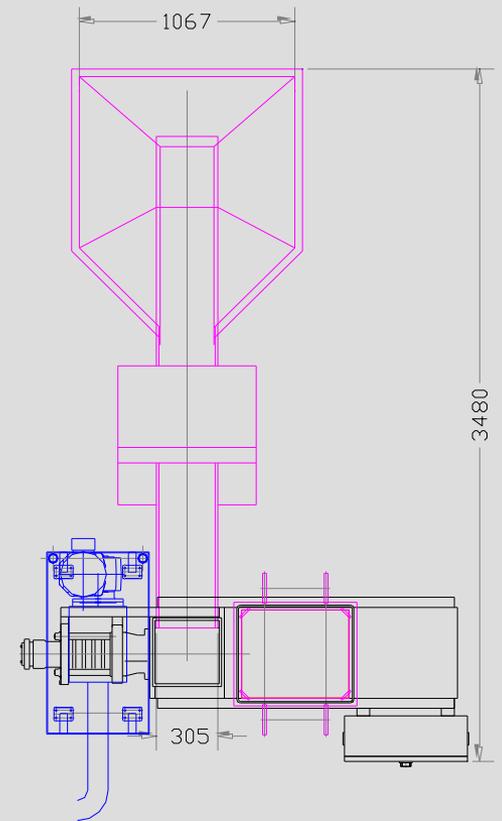
Custom POSS Meat Pumps

**Compact footprint, simple, rugged,
reliable, easy to clean & disassemble**

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ITEM	DESCRIPTION
1.	DOGLEG INCLINE CONVEYOR
2.	METAL DETECTOR FORTRESS (350x200mm)
3.	HOPPER EXTENSION
4.	POSS PDE 1500E SEPARATION MACHINE
5.	LEVEL CONTROL SENSOR (INFRA RED)
6.	PARTS SADDLE
7.	ELECTRICAL CONTROL PANEL
8.	POSS MEAT PUMP ILMP 2



POSS PDX 815

*“Once Again,
POSS Has
Raised the Bar!”*

POSS PDE 250

From 35,000 lbs / 17,000+ kg input per hr (150 Hp / 113 Kw)
To 500 lbs/250 kg input per hr (7.5 Hp / 5.6 Kw),
there's a POSS to suit your requirements.

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POSS Models / Specifications	PDE Series						
	250	250 ILP	375	500	1500	2500	3000
Mar 10, 2010 -Last update - KBG							
Drive HP / KW	7.5 / 5.7	7.5 / 5.7	10 / 7.5	20 / 15	25 / 18	40 / 30	40 / 30
Drive HP/KW - Beef/Pork Soft Bones					30 / 22	50 / 37	
Rated input capacity (kg/hr)	250-400	250-400	300-600	500-1500	1500-2000	2500-3000	2500-3000
Crated Weight (kg)	375	375	750	890	1100	1450	1400
Infeed Screw Diameter	4"	4"	4.5"	4"	5.5"	6"	5"
Separation Screw Diameter x Head Length	4" x 5"	4" x 5"	4.5 x 8"	4" x 6"	4" x 8"	5" x 8"	5" x 8"
Screen Plates Available?	yes	yes	yes	standard	standard	standard	standard
Drive Design							
Model E (Unidrive) Available?	std	std	std	yes	yes	yes	yes
Single Screw or Two Screw	single 4"	two	either	single 4"	two	two	single 5"
Inline Pump Available?	no	yes	yes	optional	yes	yes	optional
Input size required?	fist sized	fist sized	fist sized	fist sized	fist sized	whole *	fist sized
*Extended Hopper Available?	yes	yes	no	no	no	yes	no
Knife Assembly Available? (for "bone in" drums)	no	no	no	no	yes	yes	no
POSS Level Control Option	n/a	n/a	standard	standard	standard	standard	standard
Control Panel Available?	stop/start only	stop/start only	Model A	Model A	Model A	Model B	Model A
Controls - Model A = Wye Delta or Direct Start Stop panel, mounted on the machine, with an infra red eye control for an infeed conveyor. Model B controls an infeed system							
Auto Restrictor Upgrade Available?	no	no	no	no	no	Yes	yes
POSS IL Meat Pump Available?	yes	yes	yes	yes	yes	yes	yes
POSS IL Meat Pump Model	optional	optional	ILMP345	ILMP345	ILMP56	ILMP56	ILMP56
<i>HP</i>			3	3	5	5	5
<i>Infeed Auger Dia</i>			4.5"	4.5"	6"	6"	6"
<i>POSS Pump Model</i>			CCM	CCM	PK6	PK6	PK6
<i>Outlet Pipe</i>			3"	3"	4"	4"	4"

POSS Models / Specifications	CCM Series			PK6 Series	
	2000	2000 ILP	2000 D2	ILP (Perf)	S6S Plates
Mar 10, 2010 -Last update - KBG					
Drive HP / KW	40 / 30	40 / 30	50 / 37	40 / 30	60 / 45
Drive HP/KW - Beef/Pork Soft Bones					
Rated input capacity (kg/hr)	2000+	2000+	3000+	4000+	4000+
Crated Weight (kg)	1200	1200	1450	1600	1600
Infeed Screw Diameter	4.5"	4.5"	6"	6"	6"
Separation Screw Diameter x Head Length	4.5" x 8"	4.5" x 8"	5" x 10"	6" x 12"	6" x 12"
Screen Plates Available?	yes	yes			standard
Drive Design					
Model E (Unidrive) Available?	standard	standard	standard	standard	standard
Single Screw or Two Screw	single 4.5"	two	two	two	single
Inline Pump Available?		standard	optional	standard	no
Input size required?	fist sized	fist sized	whole	whole	whole
*Extended Hopper Available?	no	no	yes	no	yes
Knife Assembly Available? (for "bone in" drums)	no	yes	yes	yes	no
POSS Level Control Option	standard	standard	standard	standard	standard
Control Panel Available?	Model A	Model A	Model A	Model B	Model B
Controls - Model A = Wye Delta or Direct Start Stop (with M/D option) and includes Auto Restrictor Controls					
Auto Restrictor Upgrade Available?	no	no	no	no	yes
POSS IL Meat Pump Available?	yes	yes	yes	yes	yes
POSS IL Meat Pump Model	ILMP56	ILMP56	ILMP56	ILMP75/6	ILMP756
HP	5	5	7.5	10	10
Infeed Auger Dia	6"	6"	6"	6"	6"
POSS Pump Model	PK6	PK6	PK6	PK6	PK6
Outlet Pipe	4"	4"	4"	4"	4"

