

DESIGN LIMITED

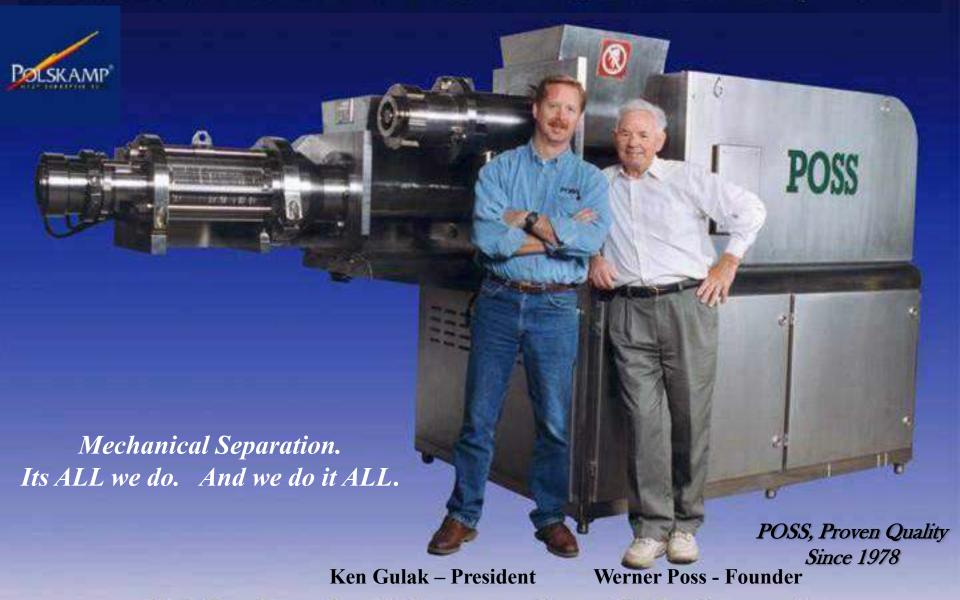
"World Leader in Quality Separation Solutions since 1978" It's ALL we do. And we do it ALL.

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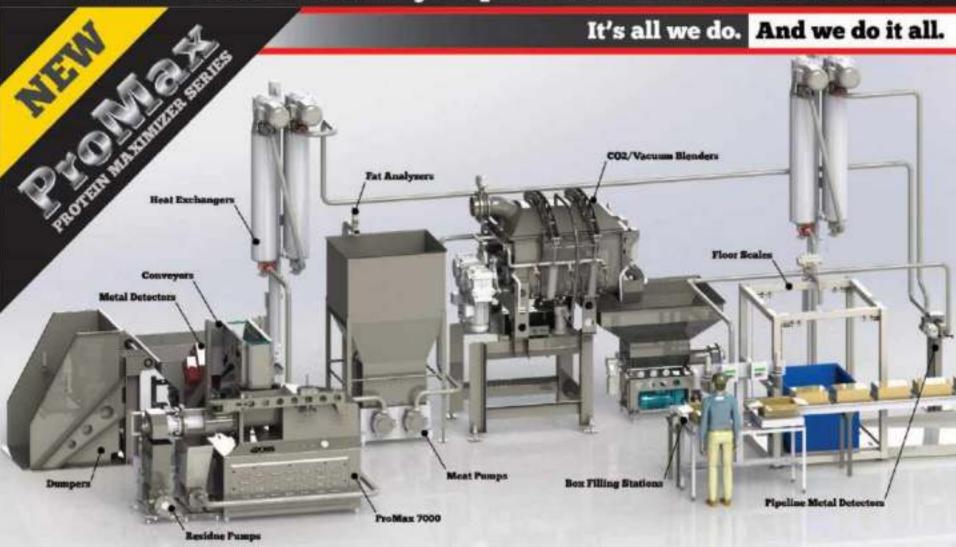
POSSPDDX 2 -10 Dual Stage 20 t/hr Separator



" Mechanical Separation Solutions

POSS-SEPARATORS.COM

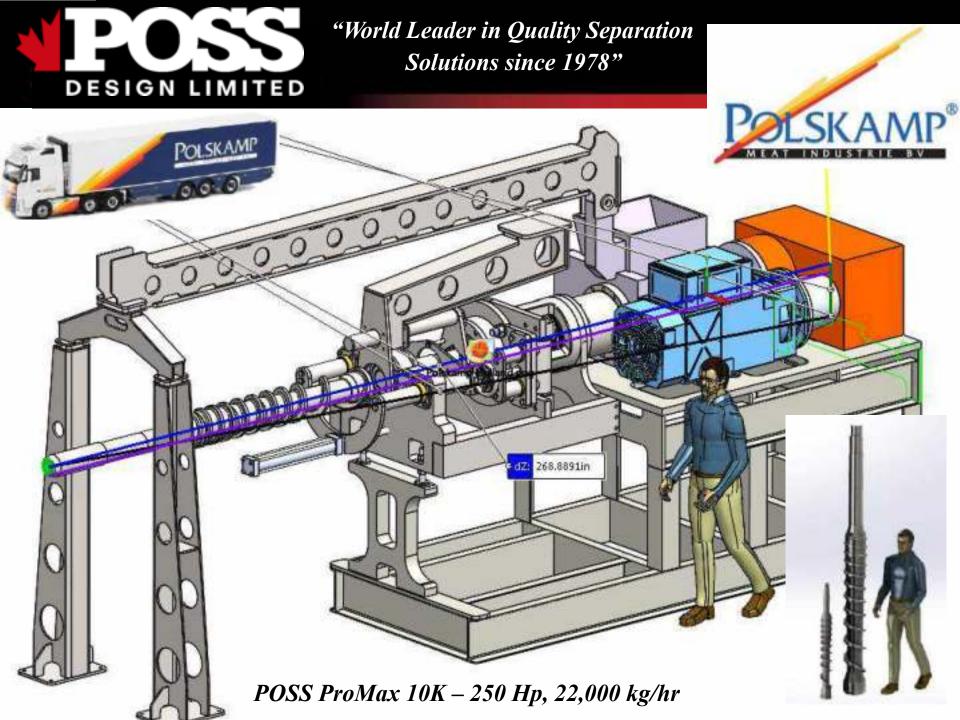
World Leader in Quality Separation Solutions Since 1978











"World Leader in Quality Separation Solutions since 1978"

It's all we do. And we do it all.

Separate "Soft" from "Hard", including the following:

- 1. Mechanical Deboning Chicken / Turkey / Beef / Pork / Fish
- 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. Advanced Meat Recovery POSS AMR, replaces the expensive, high maintenance belt and drum machines
 From 500 to 50,000+ lb/hour input capacities

Over 1,800 Installations in 69 Countries Worldwide!



Current POSS Applications: We Separate "Soft" from "Hard" every hour, every day.

1.	Chicken	Standard Deboning (MDM / MSC / 'Ground') 70-80% yields
		Soft Separation / Dual Stage — Coarse Ground — 30-40% yields
		Bony Trim – Coarse Ground – 92-94% yields
		Keel / Breast Meat Separation- 50/50
		Single Screw & Extra Coarse Plates ProMax – Coarse Ground from
		Whole Muscle Input (Spent Hens/Layers, Whole Legs) 80-90% yields
2.	Turkey	Standard Deboning (MDM) 70-80% yields
	V	Soft Separation –Coarse Ground – 30-40% yields
		Bony Trim – Coarse Ground – 90-95% yields
		Extra Coarse Plates - Coarse "Ground Turkey" from Whole Muscle Input
2	n 1	Bony Trim – Coarse Ground with Dual Zone Inline Pump– 75+% yields Pork Skin
3.	Pork	De-Fatting – Single Pass or Dual Stage / Gelatin
		Back/Neck , Blade, Sirloin, Chine, Tails, Briskets, Rib Deboning – 40+% yields
1	Doof	Beef Shank Desinewing, Grinder Reclaim Rib tip / trachea cartilage Separation
4.	Beef	Back / Neck and Rib Deboning
5.	Pork/Beef AMR	Advanced Meat Recovery -Pro11CP replaces the piston/belt & drum 2 nd pass
6.	Fish	High Volume (20+ tonne/hr / edible or pet food) – ground or surimi
		The sound (10 tolling in a carrier of best 1000) 8.00000 0.5000000



"World Leader in Quality Separation Solutions since 1978"

Over 1,800 Installations in 69 Countries Worldwide! From 500 lbs/hr (7.5 hp) to 50,000+ lb/hr (250 hp) input capacities, POSS machines cover the full spectrum of separation applications.

There are more than 1,800 machines running in more than 69 countries worldwide, with over 490 installations in the North American Separation Market alone.

More than 1,200 machines are running conventional chicken mechanical deboning, both edible and petfood. More than 185 are running turkey deboning, making MST or USDA Ground Turkey from bone in turkey drums. Pork deboning and beef shank de-sinewing, plus various niche applications including pork skin de-fatting and boney trim to recover high value coarse ground product make up the balance of the installations. The new ProMax11CP is brand new, game changing technology in the competitive AMR market dominated by piston / belt&drum machines.

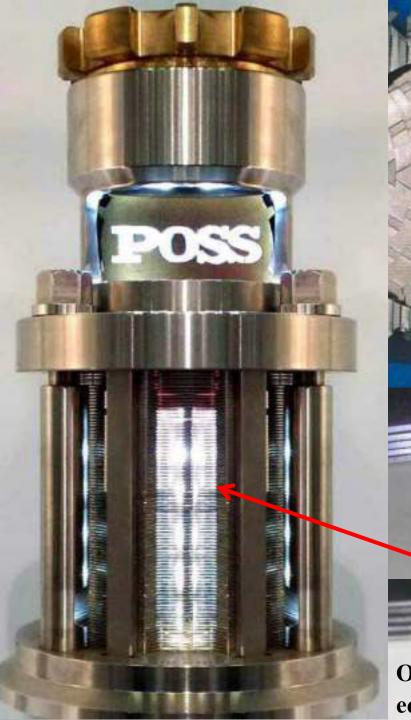
MORE THAN <u>1,450,000</u> lbs of TURKEY is run on POSS machines in North America EVERY <u>HOUR</u>, EVERY DAY!!

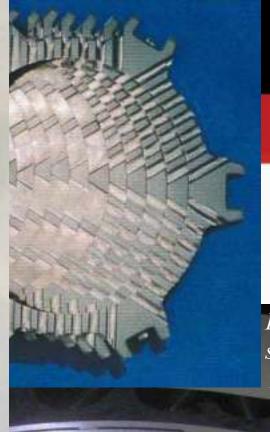


It's all we do. And we do it all.

Key Points which distinguish POSS Mechanical Separators:

- 1. YIELD recover at least 95% of the meat available on Raw Material >> \$\$\$\$
- 2. <u>"POSS PH2 Screen Plate" Separation Head</u> = now with the new ProMax Screen Carrier for easy handling / assembly, sanitation > Better Texture (Perforated Style available)
- 3. Low temperature rise during separation = Low Pressure, Low RPM (200-280), Positive Feed
- 4. Extremely rugged design and construction = Lowest Cost Operation over the Long Term (Thrust Bearings, Belts/Sheaves, 5:1 Gear Box, Long Life of wearing parts)
- 5. Raw Material input directly into the hopper = no pre-grinder or pumps, capable of 500 50,000 lbs/hr input (200 22,000 kg/hr input) capacities
- 6. <u>Hydraulic ProMax Flow Through Auto Restrictor Unique to POSS ></u> ensures Optimal Yields
- 7. <u>Versatility of applications</u> = 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 an Annual Service Contract





Patented POSS Screen Plates:

Up to 4 times as much opening for meat recovery,

Compared to drilled Screens, minimizing Temperature rise and Retaining the binding **Properties of the meat**

 $Individual\ screen\ plates = Easy$ sanitation & maintenance

Now available on the new PDL

Screen Carrier Assembly!

Try the tougher POSS PH2 Screen Plates for

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 High Throughput

> & Maximum Texture!



POSS Patented Screen Plates

Results in:

Highest Yield

Best Texture
Lowest Temperature Rise
Lowest Bone/Calcium

Maximum Binding and Moisture Pickup

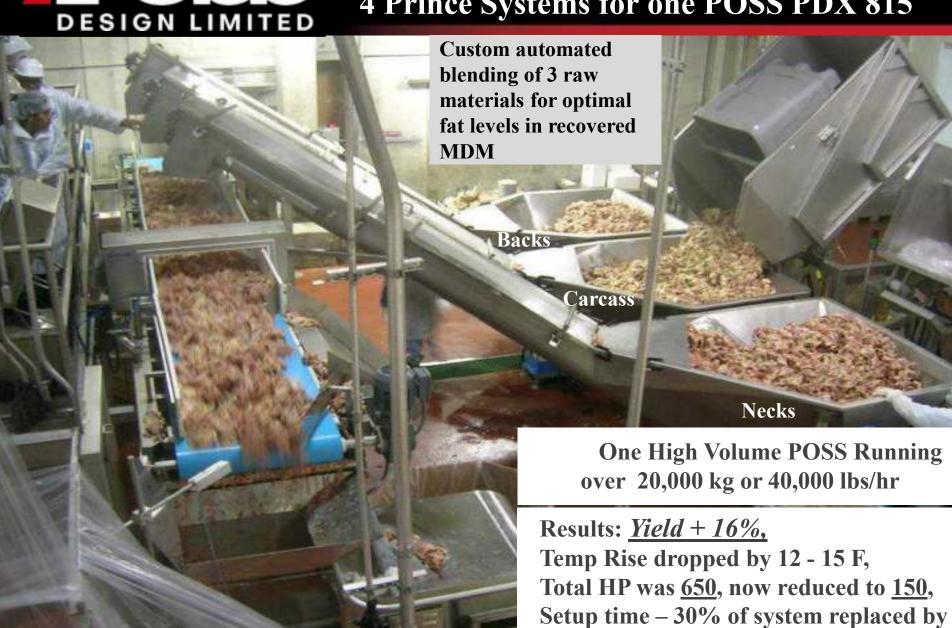
Truly a "Premium" Ground Product from 'bone in' raw material!

Try the <u>NEW POSS PH2</u> Screen Plates for longer life between reworks!



Case Study – US Client replaces 4 Prince Systems for one POSS PDX 815

the POSS



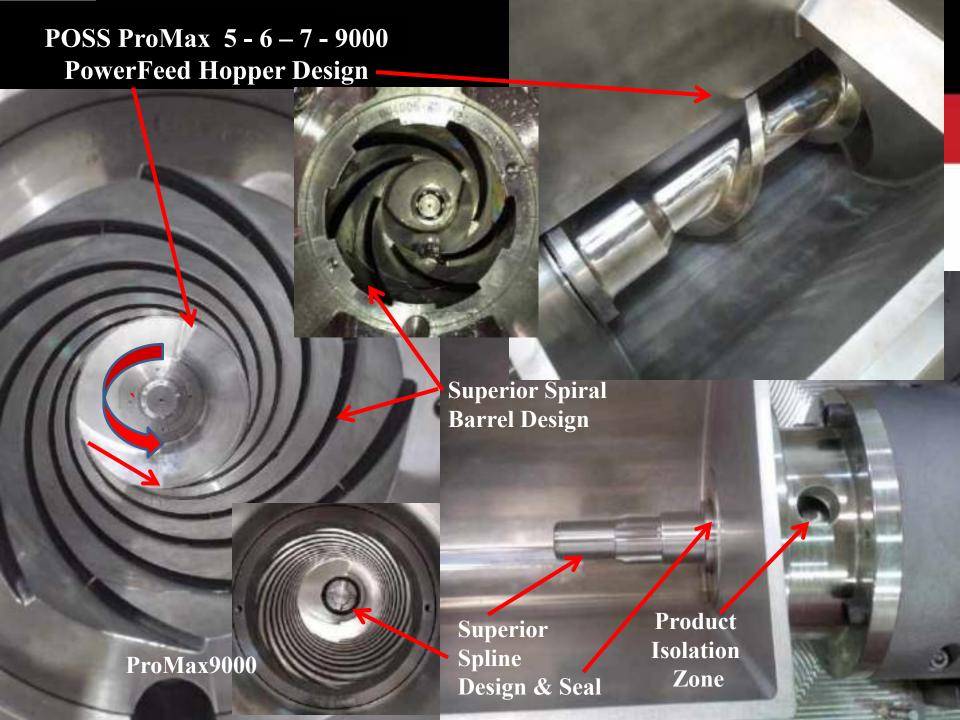


POSS

POSS ProMax 5" & 6" Series







The new POSS ProMax9000 series — launched Jan 2018

9" dia screw, low rpm, extended spiral barrel bell housing sleeve

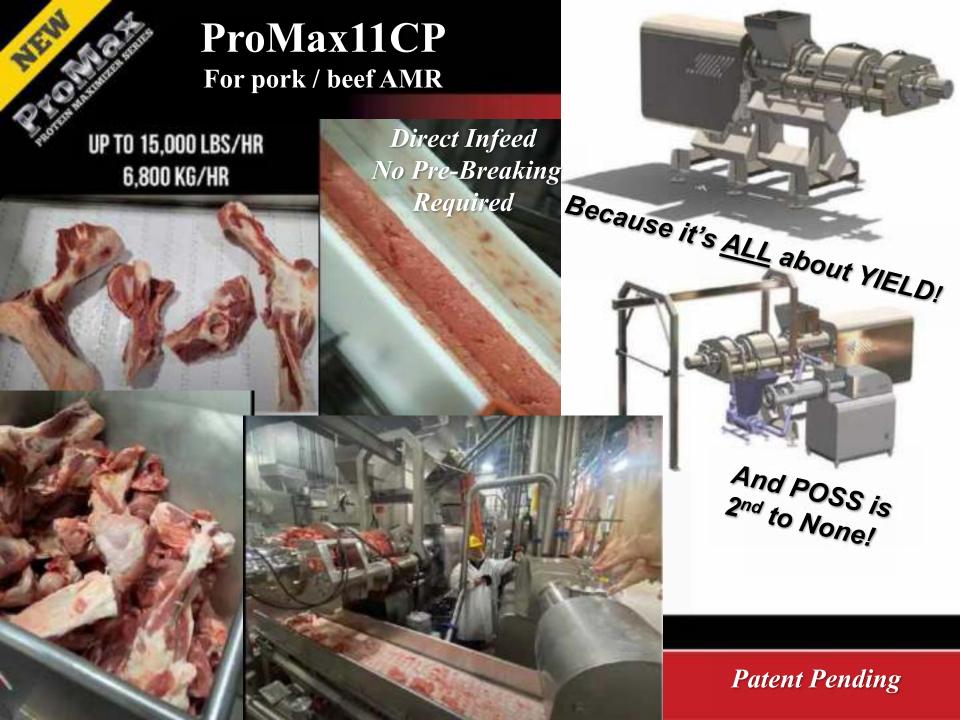
ProMax Screen plate carrier in one pc head, Assembly crane with

screw puller, 200 – 250 hp, Zambello 5:1 Gearbox with integrated thrust bearing

PROMAX9000 SHOWN READY FOR SANITATION PROMAX9000 SHOWN FULLY ASSEMBLED POSS ProMax9000 Inputs up to 17,000 + kg / hr or 37,400 + lbs / hrENGRAVE: 002984-R0





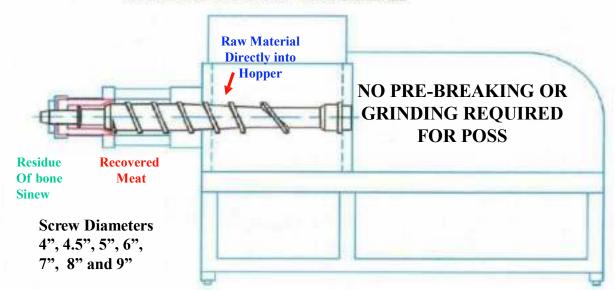




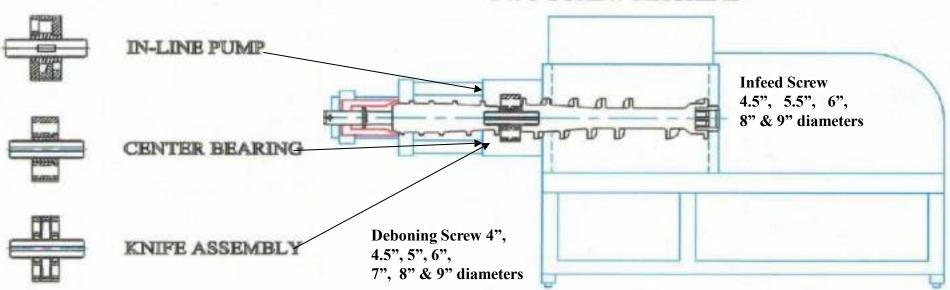
POSS Separators

- 2 Basic Machine Styles:
- 1. Single Screw
- 2. Two Screw with one of Three Options

SINGLE SCREW MACHINE



TWO SCREW MACHINE





POSS Design Limited

"World Leader in Quality Separation Solutions"



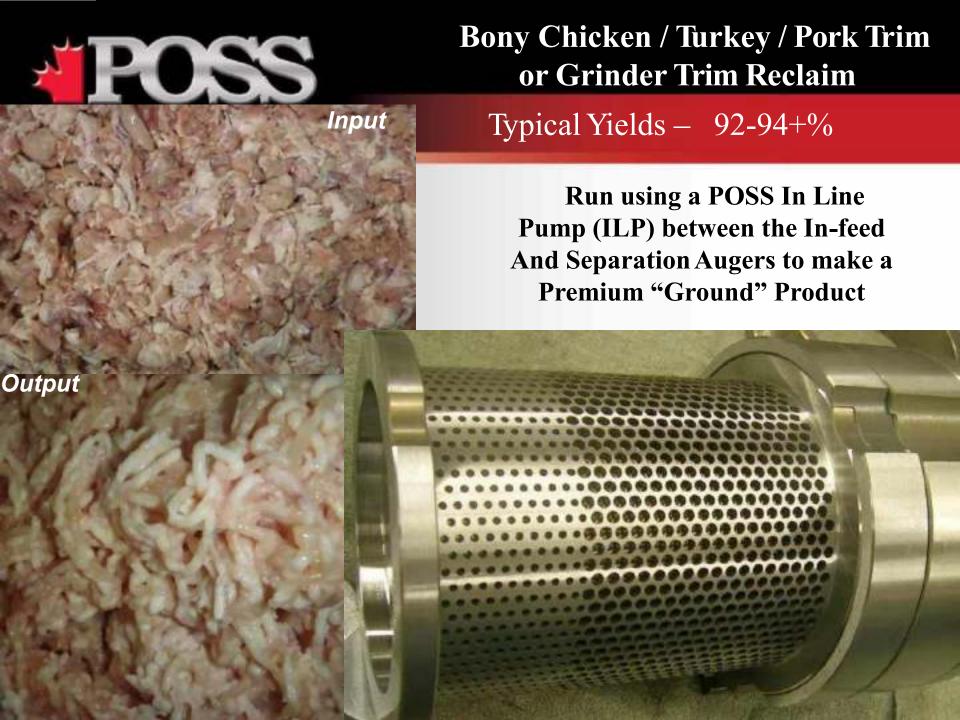
On the 2 Screw machines, there are 3 options available:

Center Bearing
Chicken or Turkey carcass
Necks, Backs or Wings

In Line Pump
For Softer Products Such As
AMR, Bony Trim, & Grinder

Knife Assembly for Beef & Pork

Trim Reclaim





Bony Chicken / Turkey Trim or Grinder Trim Reclaim

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



Typical Expected Yields from your POSS "optimal yields" consistently achievable with the POSS Auto Restrictor, "floating" against the bone residue stream — **Only from POSS**.

Self Mile	<u>Chicken</u>	<u>Turkey</u>
Input Raw Material		
• Necks (Skin on)	78%	73-75%
• Necks (Skin off)	76%	70-75%
• Breast Cages	75+%	71-74%
• Backs	77%	65-72%
• Thighs (skin on)	78%	88+%
• Drumsticks (skin on)	72- 74%	78-80 + %
Wings Complete	65%	71-73%
• Spent Fowl (less breast)	84-86%	
 Complete frames 	80-84%	70-73%
 Mixed Frames & Backs 	74-78%	74-76%
 Boneless Turkey Drum Desinewing 		92+%
Boney Trim	92-94+ %	95 + %
Grinder Trim Reclaim	80+%	80+%



The new POSS ProMax series What's new?



With 5:1 Extruder Drive Gearbox

With Integrated Thrust Bearing and Isolation Zone



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It's all we do. And we do it all.

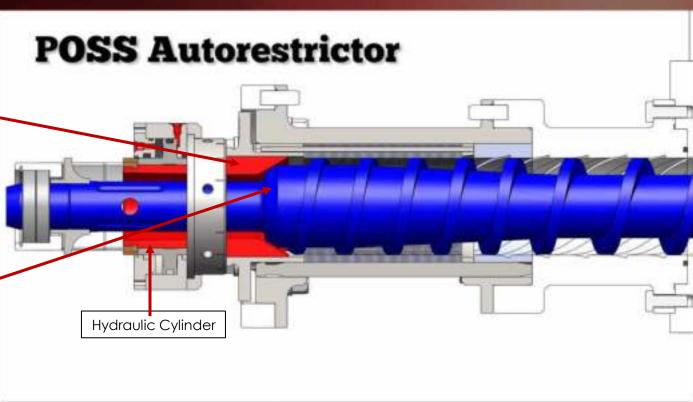


Hydraulic control maintains consistent "optimal yield"

The fixed tapered face of the restrictor body

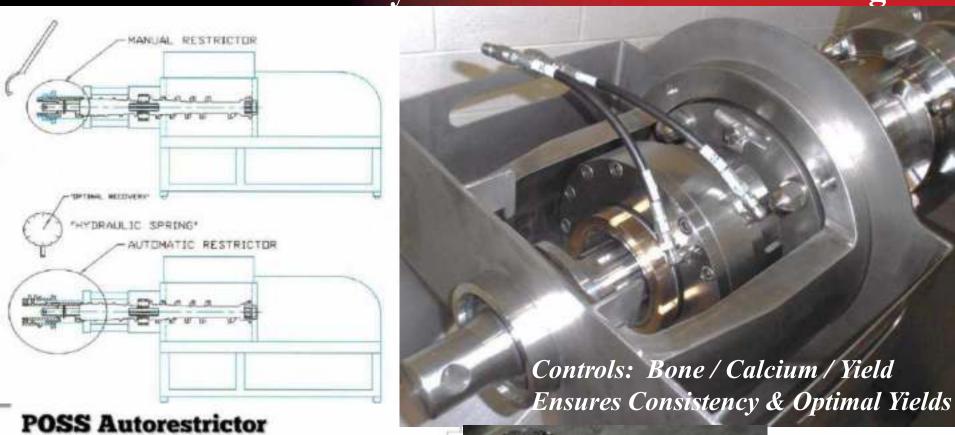
"floats"

against the bone residue stream coming off the rotating discharge taper of the separation screw.



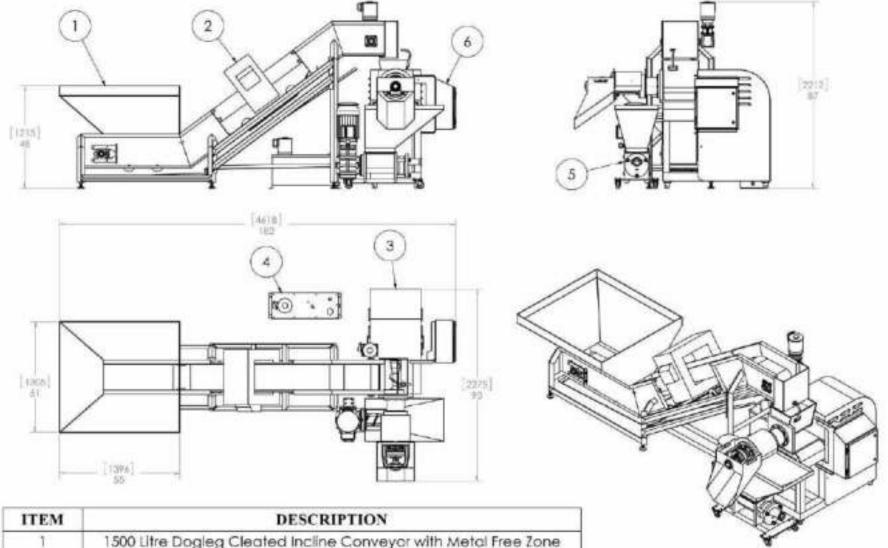


POSS Autorestrictor For "Optimal" Yield by "Floating" against thebone residue stream! Hydraulic Autorestrictor Package



POSS

Are YOU getting enough?

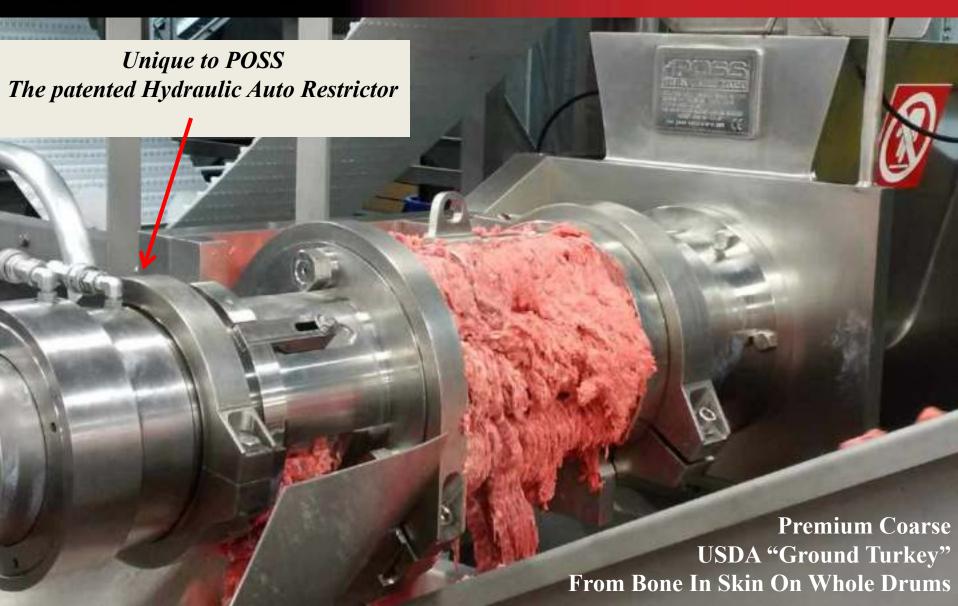


ITEM	DESCRIPTION
1	1500 Litre Dogleg Cleated Incline Conveyor with Metal Free Zone
2	16 X 14 Inline Metal Detector
3	PDL 5 Series POSS Separator with Autorestrictor
4	POSS Autorestrictor S.S. Power Unit
5	POSS Meat Pump (Auger Fed)
6	POSS Machine Mounted S.S. Control Panel with Touchscreen HMI



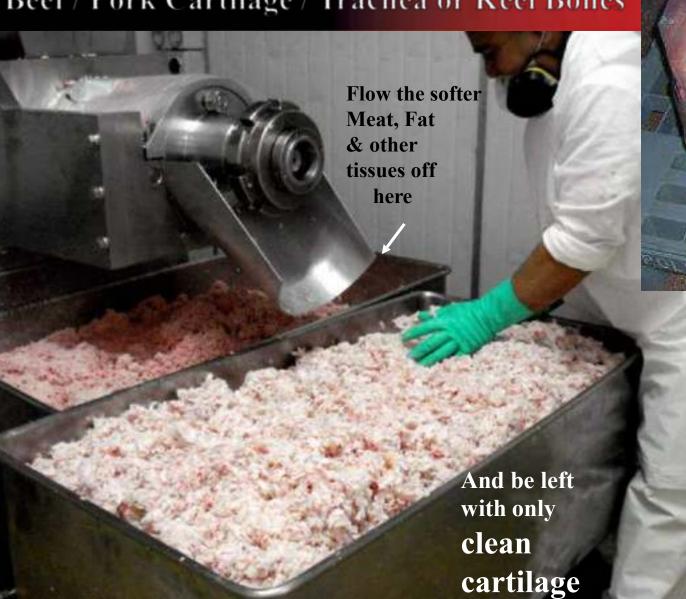


Compact, Clean, High Volume, High Yield, Great Texture & Low Temp Rise



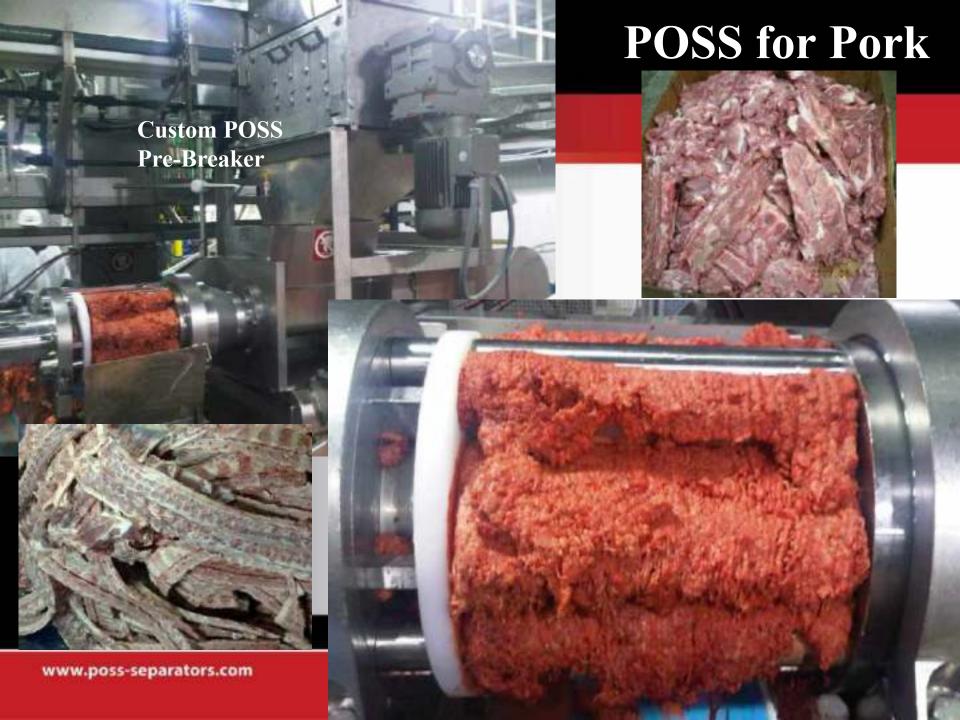
We Separate "Soft" from "Hard" every hour, every day.





Cartilage from
Beef or Pork
Trachea
Or Chicken
Keel Bones

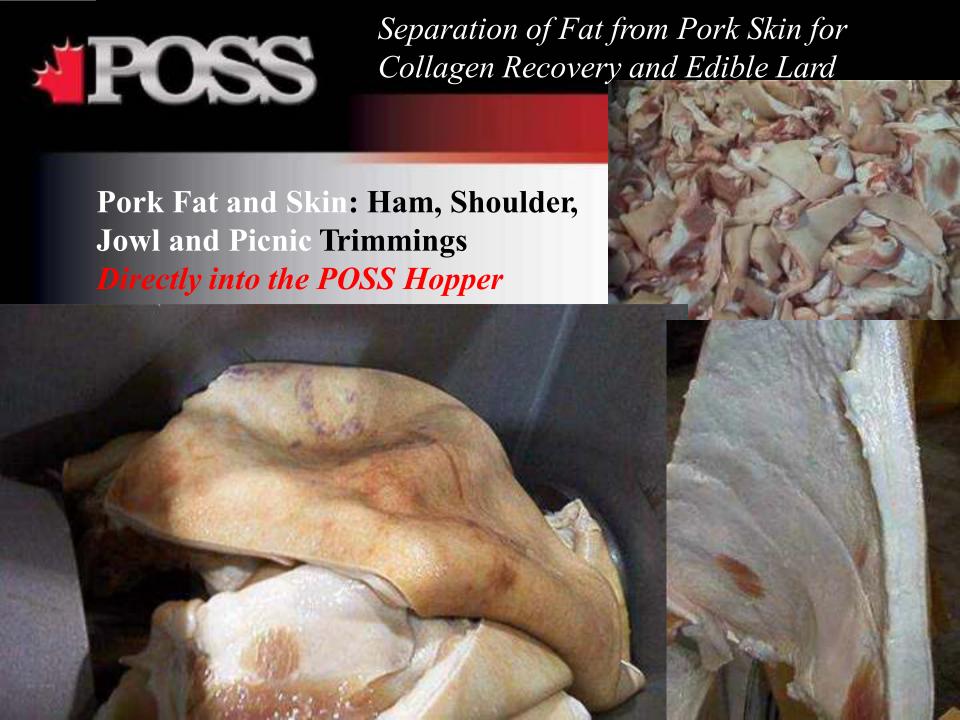






For Keel Bone Cartilage / Ground Breast Meat Separation Approximately 50 / 50 separation of







"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





POSS CCM 2000 set up for Beef Shank

Desinewing & Lean Upgrade

Inputs - untrimmed unpeeled hind shanks

77% 8mm Coarse Ground 90-94 Lean 19% 3mm Coarse Ground 75-85 Lean

4% Sinew/Residue

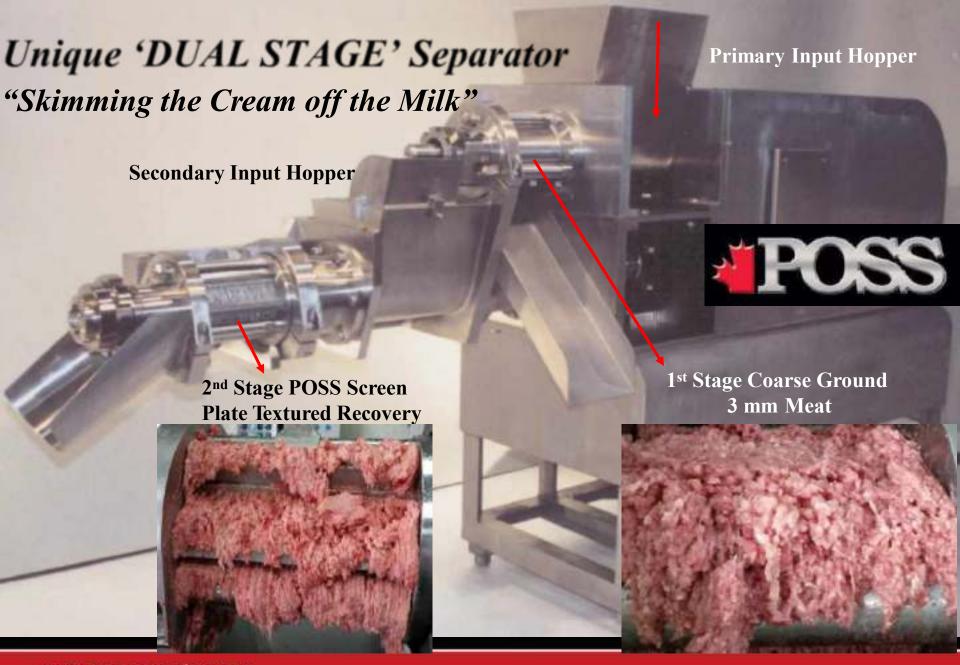
100%

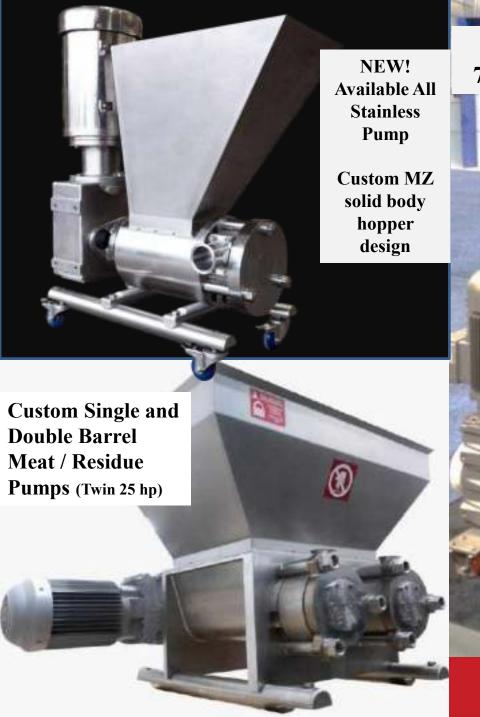
Input: Unpeeled, untrimmed hind shank

4% Sinew/Residue 19% "regular" Ground

www.poss-separators.com

77% yield - 8mm Coarse Ground Lean from unpected hind shank









POSS Dumpers



- 1. Heavy Duty 3/8" Plate Stainless Steel
- 2. 100% Sanitary Open Profile Construction
- 3. Dual Cylinder Fail-Safe Design
- 4. Fail Safe Hydraulic Design
- 5. 35°Dump Angle
- 6. 3000 lb Rated Capacity
- 7. 60" & 80" Dump Heights Available
- 8. Interlocked Safety Guard
- 9. Custom Guarding Available
- 10. Pneumatic Options Available
- 11. Stand-Alone Hydraulic Power Unit Available
- 12. Heavy Duty SKF Plummer Block Design



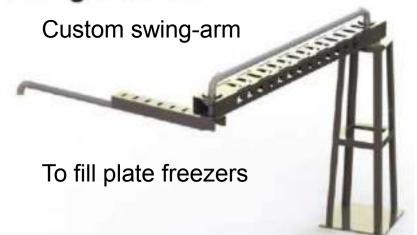
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Box Filling Station



Integrated Continuous Inline Fat Moisture Protein Analysis

The system allows the user to monitor in real time the fall moisture protein levels of the product. The samples can be taken at a user defined rate or interval which can then be used to regulate input material to achieve desired fat set points or limits.

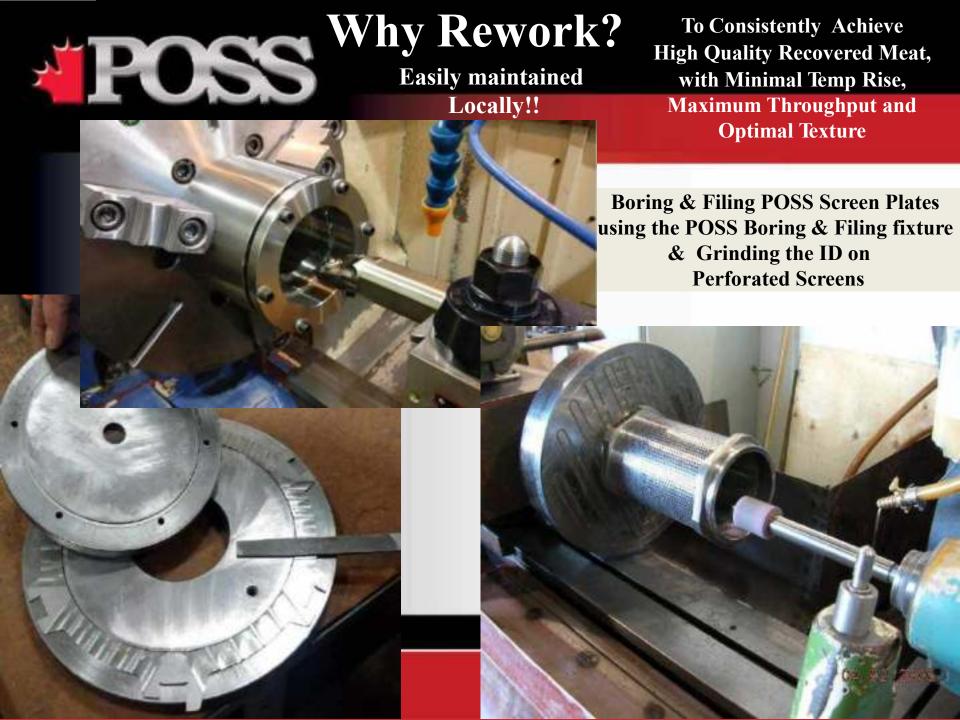


- · Reduce lab sample costs
- Instantaneous data collection
- . Turn-key solution
- Analog and Digital output for closed loop control response
- Temperature monitoring
- Touch screen HMI
- · Easily integrated into PLC system
- IP67 with cable gland entry



Quality Custom Solutions to suit your specific requirements.

POSS		Pro Max 4 / 5					Pro Max 6/7/9				PDZ - 2017 Series				
		300C/500/1000/1500/3000						/6000/	7000/	9000	PDZ - 2017 Series				
Mechanical Separation		300C	500	1000	1500	3000	4000	6000	7000	9000	5	7	710	812	815
Solutions															
	up to kg/hr) up to lb/hr)	500 1,100	600 1,320	1,000 2,200	1,500 3,300	3,000 6,600	4,000 8,800	6,000 13,200	8,000 17,600	15,000 33,000	6,000 13,200	8,000 17,600	10,000 22,000	12,000 26,400	16,000 35,200
Standard Rated Power	(Hp) (Kw)	5 - 7.5 3.7 - 5.7	10 7.5	20 15	25 19	30 /40 22.5 / 30	50 37.5	60 45	100 75	150-200 113/150	75 56	100 75	100 75	125 94	150 113
Available Screw Setup (Single/Dual)		•/••	•/••	•/••	•/••	•/••	•/••	•/••	•/••	••	•/••	•/••	•/••	•/••	•/••
(Single/Dual) Patented POSS Screen Plate Option		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Drilled Style Perforated Screen Option		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Inline Pump Option		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Heavy Duty		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Thrust Bearing Side Arm on Machine											•	•	•	•	•
Head Clamp &											•	•	•	•	•
Saddle Assembly Level Control Option		•		•					•	•	•	•	•	•	
Assembly Crane &		•	•	•	•										
Hoist Option Available								•	•	•	•	•	•	•	•
Parts Cart, Washdown, & Assembly Rack		•	•	•	•	•	•	•	•	•	•	•	•	•	•
Auto Restrictor Option						•	•	•	•	•	•	•	•	•	•
Machine Length	(in) (mm)	54 1,372	58 1,473	82 2,083	85 2,159	85 2,159	94 2,388	94 2,388	125 3,175	151 3,835	117 2,972	117 2,972	122 3,099	122 3,099	144 3,658
Machine Width	(in) (mm)	27 686	24 610	24 610	35 889	35 889	35 889	35 889	42 1,067	55 1,397	45 1,143	45 1,143	45 1,143	45 1,143	60 1,524
Infeed Screw Diameter	(in) (mm)	4 102	4 102	5 127	5 127	5 127	6 152	6 152	7 178	9 229	8 203	8 203	8 203	8 203	8 203
Hopper Length POWERFEED DESIGN	(in) (mm)	10 254	10 254	10 254	16 406	16 406	16 406	16 406	25 635	25 635	25 635	25 635	25 635	25 635	25 635
Head Length	(in) (mm)	5 127	5 127	5 127	8 203	8 203	10 254	10 254	12 305	16 406	14 356	16 406	16 406	16 406	18 457
Head Diameter	(in) (mm)	4 102	4 102	5 127	5 127	5 127	6 152	6	7	9 229	6 152	7	7	8 203	8 203
Infeed Height	(in) (mm)	54 1,372	55 1,397	60 1,524	60 1,524	60 1,524	62 1,575	62 1,575	72 1,829	86 2,184	70 1,778	70 1,778	70 1,778	70 1,778	80 2,032
machine length does n	<u> </u>				1,524	1,524	1,3/3	1,5/5	1,829	2,184	1,//8	1,//8			2,032 2,032
Manufacturer reserves					as deem	ed necessi	arv withou	t notice					. abiisii	Ja Jan Ze	, 15 NOVA





Why Rework?
To ensure: Optimal Yields

Minimize Temperature Rise

Maximize Throughput / Optimal Texture

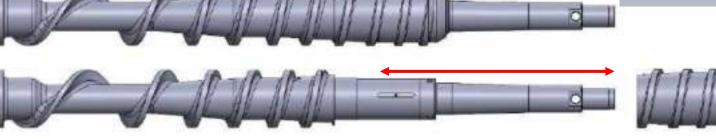
The BEST investment is in the proper rework of the wearing components.



Reworked Screw: ½" thick flights with square, sharp 90 degree corners, proper root diameter, proper ¼" radius on flight/root, reworked bearing surface and discharge taper



POSS ProMax7000 with the replaceable flight sleeve







POSS is 2nd to none,

and its ALL about Yield!



The POSS Protein Maximizer / ProMax Series of meat-bone separators continue to set the bar for quality and performance worldwide. Completely redesigned, from the drive through to the newly designed flow through restrictor and bearing carriers, the ProMax series provides unparalleled performance across the full spectrum of measures - high yield, low temperature rise, and sustained high through-put - all while meeting the lowest possible bone/calcium in the premium coarse ground meat recovered from the POSS Screen Plate head. Consistently high YIELD requires a sustained axial load through the screw into the thrust bearing assembly; and when it come to YIELD, POSS is second to none. The redesigned POSS flow-through hydraulic Auto Restrictor, unique to POSS, coupled with a single reduction, thrust capable extruder gearbox (with a 4:1 service factor), ensures years of reliable service while maintaining the

highest yields in the industry. The unique POSS Powerfeed Hopper, the extended spiral barrel compression zone, the breakthrough POSS Screen Plate Carrier Assembly and the new screw core / replaceable sleeve separation screw design ensures POSS will maintain its position as the World Leader in Quality Separation Solutions since 1978. From 500 lbs/hr (7.5hp) to 55,000+ lbs/hr (250hp) input capacities, POSS machines cover the full spectrum of separation applications. There are more than 1,700 POSS machines running in more than 69 countries worldwide, and our client roster includes the largest meat processors in the world. Its ALL we do, and we do it ALL. Let us build one for you.

> Ken B Gulak , President kgulak@poss-separators.com



New ProMax 300C



"World Leader in Quality Separation Solutions since 1978"



Its ALL we do. And we do it ALL.



Let us build one for you.



WE BUILD SEPARATORS FOR THE BEST COMPANIES IN THE WORLD





















Kraft



































