Slitters - Coaters - Accumulators - Winders



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PTiHeadquarters

PTi offers several options for Slitting, Coating and Winding sheet. Slitting systems include both rotary and razor style slitters depending upon the application. High crystalline polymers perform best with a rotary style slitter whereas, soft flexible polymers works well with razor style. Coaters include simple submersion style with squeegee, indirect impingement with squeegee and a controlled transfer roll coater that is featured in this brochure. Accumulators are recommended to stop the sheet for safely operating the winding equipment. It is recommended at higher web speeds, particularly over 100+ fpm to aid in the proper transfer and handling of the sheet. This also improves the overall quality of the rolls being produced as sheet tension is maintained and the operators have ample time to transfer the web with accuracy. Winders featured herein, include Cantilever style which eliminates core-rod handling and A-frame style for larger roll diameter build-up.

Please Note: Other winders are available including Fixed Shaft, Turret style and Fully Automatic (refer to www.ptiextruders.com for more information on these styles of winders). Systems can be configured for handling 1 – 3+ webs simultaneously depending on your specific processing requirements.

World Class Sheet Extrusion Systems

About PTi

PTi is a leading producer of high quality plastic sheet extrusion systems. Engineered to exact standards PTi systems offer a unique array of design features resulting in superior equipment performance. Supporting a world wide marketplace, PTi provides its customers with sheet extrusion systems that manufacture sheet goods to the highest quality standards found anywhere throughout the industry. This brochure contains a sampling of sheet winding products and services that PTi offers. While not intended to be all inclusive there are many equipment configurations contained in the pages to follow that provide solutions to a multitude of applications facing the sheet producer for today and beyond.

Product descriptions and/or performance data that are represented herein are for information purposes only and are not intended for any other use. PTi reserves the right to make changes and/or enhancements to any of the product and service information contained herein without prior notice.



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Slitters

Rotaty Slitter Options

A 2 position rotary slitter with independent blade position mechanisms shown with controls and edge trim guide rings



Rotary slitter with driven anvil assembly features precision dove tail mount, positioning mechanism and mating anvil blade ring



Operator moves the blade assemblies into the desired position by rotating the mechanism hand wheels

- Heavy duty frame infrastructure supports assembly and eliminates operational vibration
- Rotary blade assemblies mount to a precision dove tail
- Modular design features permit easy operation and maintenance

- Positioning mechanisms move the blade assemblies to the desired locations with digital accuracy
- 2 assemblies are required for removing edge trim (one on each side of the sheet) and an additional center slitter is required for 2-up winding located on the mezzanine prior to the winders

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Razor Slitter Options



Eight razor assemblies pictured on application above creates 7 ribbons and removes edge trim



Ultra advanced razor assembly design features a dual configurable knife holder to optimize cutting results in the most demanding applications



Blade fully retracts into the guard for safety purposes



Blade 'pitch' adjusts +/- 15 deg. to optimize performance & prolong blade life

- Heavy duty mounting frame features keyed blade holder guide rod for precision cutting and secures blade assemblies into the proper position
- Separate guard guide rod permits razor blades to fully retract into the safety guards and protrude outward when in the cutting position
- Knurled knobs provide manual release for ease of blade holder positioning
- Gradation scale indicates incremental blade holder position for desired cutting location
- Heavy duty gearbox and hand crank raises and lowers the blade assemblies out of and into the cutting position and eliminates back driving



Blade 'roll' adjusts +/- 15 deg. for precise cutting & to minimize edge risers





Cut-away images reveal squeegee and transfer roller relationship and neutral web path pass-thru



Upstream (top) and Downstream (bottom) prespectives shown.

- Neutral pass-thru for ease of thread up
- Top, bottom or both side coating application via contact transfer rollers combined with regulated squeegee rollers and precision fluid delivery
- Precise delivery of coating solution via flow control valves to the delivery tube
- Modular compact design permits conveyor or floor mounting
- Recirculation tank, pump and heat exchanger regulates fluid temperature for optimum performance
- Stainless steel tank and associated wetted components coupled with coated and plastic fittings offers corrosion resistant operation

oaters Coaters Coater

All motion parts are fully guarded for safety

Pneumatic control valves adjust squeegee roller intensity regulating coating fluid volume delivery



Modular design easily integrates onto the sheet extrusion system or can be separated for floor mounting <image>

к	MODEL	ROLL WIDTH	HEIGHT	WIDTH	LENGTH(MD)	RESERVOIR	HEAT REMOVAL RATE
Ë		IN MM	IN MM	IN MM	IN MM	GAL L	BTU/Hr
COATER	TRC-42	42 1070	54 1370	71 1800	34 860	14 53	10,220
	TRC-48	48 1220	54 1370	77 1960	34 860	15 <i>57</i>	11,660
ROLL	TRC-54	54 1375	54 1370	83 2110	34 860	16 <i>61</i>	12,960
ER.	TRC-60	60 1525	54 1370	89 2260	34 860	18 <i>68</i>	14,380
RANSFER	TRC-66	66 1675	54 1370	95 2410	34 860	19 <i>72</i>	15,840
TRA	TRC-72	72 1830	54 1370	101 2570	34 860	20 76	17,280

Accumulators





Operator shuts off accumulator to deactivate the safety cage door lock for access purposes

- Neutral pass-thru provides ease of accumulator thread up
- Pneumatic tension control permits precise regulation of sheet tension
- Low friction oversized idlers provides high performance accumulation while avoiding web breaks
- Safety access doors with interlocks to assure operator safety during maintenance access
- High level alarm/interlock prevents over filling the accumulator carriage
- Heavy duty framework assures robust performance while maintaining accurate sheet tracking during the life cycle of the accumulator

tors Accumulators Accumulators Accumulators



Operator gains access thru safety cage door during maintenance and web-up activities



	MODEL	65FT	CAPACITY 100FT	130FT	ROLL WIDTH	HEIGHT	WIDTH	65FT	LENGTH (MD) 100FT	130FT
					IN MM	IN MM	IN MM	IN MM	IN MM	IN MM
	A-42XXX	A-4265	A-42100	A-42130	42 1070	163 4140	71 1810	68 1730	101 <i>2565</i>	134 3400
e	A-48XXX	A-4865	A-48100	A-48130	48 1220	163 <i>4140</i>	77 1960	68 1730	101 2565	134 3400
	A-54XXX	A-5465	A-54100	A-54130	54 1375	163 <i>4140</i>	83 2115	68 1730	101 2565	134 <i>3400</i>
	A-60XXX	A-6065	A-60100	A-60130	60 1525	163 <i>4140</i>	89 <i>2265</i>	68 <i>1730</i>	101 2565	134 <i>3</i> 400
	A-66XXX	A-6665	A-66100	A-66130	66 1675	163 <i>4140</i>	95 <i>2420</i>	68 1730	101 <i>2565</i>	134 <i>3400</i>
	A-72XXX	A-7265	A-72100	A-72130	72 1830	163 <i>4140</i>	101 2565	68 1730	101 <i>2565</i>	134 <i>3</i> 400





Intuitive controls offer ease-ofuse operator interface

Push off mechanism provides a safe and easy removal of the roll onto the

Cantilever winders eliminate core rod handling for faster changeovers

Model CW-6040/2 Cantilever Winder – 2 Position - Single Web Winding

Please Note: All winder images show web paths originating from left to right

General Features:

- Mezzanine provides a delivery pathway of the sheet to the winding positions for precision web tracking and tension control
- Each pair of winding positions include a driven set of nip rollers, guide idlers and a static eliminator
- Winding stalls feature task lighting for operator safety during web transfers
- Safety caging and interlocked doors restrict access during winding and web transfer per safety standards and practices
- Intuitive controls provide operators with a sensible production grade operator interface for ease of use
- Heavy duty framework throughout assures robust precision winding solution through equipment life cycle



Model CW-6040/4 Cantilever Winder – 4 Position - Dual Web Winding

	MODEL	ROLL DIAMETER		ROLL WIDTH HEI		WIDTH	LENGTH (MD)		
		2 Pos	4 Pos	IN AGA		IN AGAG	2 Pos	4 Pos	
		IN MM	IN MM	IN MM	IN MM	IN MM	IN MM	IN MM	
	CW-4240/X	40 1000	40 1000	42 1070	90 2290	167 4245	170 4320	333 8460	
EVER	CW-4840/X	40 1000	40 1000	48 1220	90 <i>2290</i>	173 4400	170 4320	333 8460	
TILE	CW-5440/X	40 1000	40 1000	54 1375	90 <i>2290</i>	179 4550	170 4320	333 8460	
CAN	CW-6040/X	40 1000	40 1000	60 1525	90 <i>2290</i>	185 4700	170 4320	333 8460	

Winders

A-Frame



Intuitive controls offer ease-ofuse operator interface



Model AW-7248/2 A-Frame Winder – 2 Position - Single Web Winding

Please Note: All winder images show web paths originating from left to right

	MODEL	ROLL DIAMETER 2 Pos 4 Pos		ROLL WIDTH	HEIGHT	WIDTH	LENGTH (MD) 2 Pos 4 Pos	
		IN MM	IN MM	IN MM	IN MM	IN MM	IN MM	IN MM
	AW-4248/X	48 1220	48 1220	42 1070	137 3480	162 4100	193 4900	333 8460
	AW-4848/X	48 1220	48 1220	48 1220	137 3480	168 <i>4260</i>	193 4900	333 8460
	AW-5448/X	48 1220	48 1220	54 1375	137 <i>3480</i>	174 4410	193 4900	333 8460
ш	AW-6048/X	48 1220	48 1220	60 1525	137 3480	180 <i>4560</i>	193 <i>4900</i>	333 8460
A	AW-6648/X	48 1220	48 1220	66 1675	137 <i>3480</i>	186 4710	193 <i>4900</i>	333 8460
A-FRAME	AW-7248/X	48 1220	48 1220	72 1830	137 <i>348</i> 0	192 4870	193 <i>4900</i>	333 8460

Winding stalls provide safe transition for web transfer to the ready position from the active position

Driven pull rolls maintain sheet tension during production and changeover events Drive shaft disengagement permits a quick and easy changeover and roll removal



A-Frame Winder Model AW-7248/4 has 4 winding positions at 72 in. widths & 48 in. roll diameters



Model AW-7248/4 A-Frame Winder – 4 Position - Dual Web Winding

A-Frame robust design permits large roll build-ups

	MODEL	ROLL DI/ 2 Pos	AMETER 4 Pos	ROLL WIDTH	ROLL WIDTH HEIGHT	WIDTH	LENGTH (MD) 2 Pos 4 Pos		
		IN MM	IN MM	IN MM	IN MM	IN MM	IN MM	IN MM	
AME	AW-4260/X	60 1525	60 1525	42 1070	137 3480	162 <i>4100</i>	193 4900	333 8460	
-FRA	AW-4860/X	60 <i>1525</i>	60 <i>1525</i>	48 1220	137 3480	168 4260	193 4900	333 8460	
Υ A.	AW-5460/X	60 1525	60 1525	54 1375	137 3480	174 4410	193 4900	333 8460	
DUT	AW-6060/X	60 1525	60 1525	60 1525	137 3480	180 4560	193 4900	333 8460	
ξ	AW-6660/X	60 <i>1525</i>	60 <i>1525</i>	66 1675	137 3480	186 4710	193 4900	333 8460	
HEA	AW-7260/X	60 <i>1525</i>	60 1525	72 1830	137 3480	192 4870	193 4900	333 8460	

Quick & Easy Operations

Cut Over & Start-up (... 15 seconds)



1. Once the active winder position & pull roll are stopped the accumulator begins to fill with sheet



2. Cut the sheet beneath the static eliminator and guide idler rolls for transfer



3. Jog the leading edge of the sheet towards the taped core



4. Transfer the leading edge of sheet onto the taped core



5. Jog the winder spindle several revolutions to assure the sheet is securely wrapped



6. Transferred sheet shown securely wrapped onto the winder spindle



7. Close the safety door to eliminate hazards prior to reactivating the winder position



8. Transfer complete, winder position & interlocks reactivated, winding resumes & accumulator empties excess sheet

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Roll Removal & Prep Next Transfer



1. Transfer completed from the prior steps shown & the safety door is unarmed for access



2. Safety door is opened to initiate wound roll removal & the core rod is deflated



3. Roll removal cart is centered under the wound roll into the proper unloading position



4. Cart cradle is raised using the hydraulic hand pump (right hand) until the roll weight is fully supported



5. Pneumatic push-off mechanism (lever controlled) is extended until the roll travels off the spindle



6. Push-off mechanism is retracted & the cart is manually removed from the winder stall



7. A new winding core is inserted onto the core rod shaft



8. Transfer prep is completed once double-sided tape is applied to the new core & core rod shaft is re-inflated



Model Nos. A-60100 Accumulator & CW-6040/4 Cantilever Winder – 4 Position – Dual Web Winding

Process Summary Example:

Width: Line Speed: Gauge Range: Accumulation: Wound Dia.: 60 in (1,525 mm) 180 fpm (55 mpm) 8 – 40 mils (0.2 – 1.0 mm) 100 ft (30 m) 40 in (1 m)



Optional Edge Trim Winders located beneath slitter assembly for start-up transition

16 Please Note: full surround safety caging not shown for purposes of clarity. All systems feature safety caging with interlocked cage doors.



Model Nos. A-72130 Accumulator & AW-7248/4 A-Frame Winder – 4 Position – Dual Web Winding

Process Summary Example:

Width: Line Speed: **Gauge Range:** Accumulation: Wound Dia.:

72 in (1,830 mm) 240 fpm (70 mpm) 8 - 40 mils (0.2 - 1.0 mm) 130 ft (40 m) 48 in (1.2 m)



Operator accesses guard hatch door to the driven nip rolls on top of the mezzanine

Customer Services

The success of a project is measured by the level of customer satisfaction that is maintained before and after the project has reached a conclusion.

Manufacturers of machinery can be ranked accordingly by the level of service a customer receives once the equipment is placed into operation.

PTi prides itself on being a world class manufacturer of high quality products and supplier of professional services.











Customer satisfaction is our number one goal. Please contact one of our sales representatives for more information on PTi's products and services.

PTi provides our customers with a full complement of support services before, during and long after the start-up phase of the project. These services include:

- Mechanical, electrical and process diagnostics and troubleshooting
- Project planning, scheduling and coordination
- Installation supervision and related support
- Engineer services, start-up support and training
- Laser bore alignment services
- Warranty and spare parts support
- Repair and modification site support



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