



ALPHA

7400 ★ 2500E



REDEFINING  
SHREDDING



## ALPHA 7400 SHREDDER MODULE

### GENERAL SHREDDER SPECIFICATIONS

- » Disk Rotor design
- » Width (outer side wall to side wall): 100" (2.5 m)
- » Shredder Wall thickness: 2.0" (50.8 mm)
- » Wear Liner thickness: Contoured 3.0 to 5.0" (76.2 to 127.0 mm)
- » Feed Chute: 40 degrees, 24 ft. (7.31 m) long
- » Double Feed Roll System: feed roll system with variable speed 0-14 RPM
- » QuadPlus 2500 HP DC Drive
- » Electric motor driven HPU for power for hydraulic functions & mobility

### ROTOR DETAILS

- » Speed: 720 RPM delivering 160 mph (256 km/hr.) hammer speed
- » Hammer Swing Diameter: 74" tip to tip (1,880 mm)
- » Bearing lubrication: Recirculating oil bath

### HAMMERS

- » Weight: 287 lbs. (130 kg)
- » Material: Cast Manganese
- » Quantity: 10 to 16, 12 is standard
- » Configuration: Variable per customer requirements

### OTHER SHREDDER CASTING DETAILS & FEATURES

- » Anvil: Three piece bolt in design
- » Reject Door: 36" (914.4 mm) tall opens inward
- » Back Wall: 7.5" (190.5 mm) thick, reversible
- » Reject Door and Back Wall: Angled grate openings

### UNDER MILL VIBRATOR

- » Vibratory shaker deck collects processed scrap from shredder
- » Heavy duty construction
- » Dimensions: 74" (1,880 mm) wide, 182" (4,623 mm) long, 16,000 lbs. (7,257 kg)
- » Electrically powered @ 900 cycles/minute

### FEED SYSTEM

- » Ramp: 40 degree angle, 24 ft. (7.3 m) long, loading height 30 ft. (9.1 m); one (1") inch (25.4 mm) thick replaceable AR wear plates under feed rolls

### DOUBLE FEED ROLL SYSTEM

- » Feed Roll Speed: Variable, 0-14 RPM
- » Hydraulic Drive: Two hydraulic motors driven by closed loop piston pumps

### FEED ROLLS

- » Upper: 42" (1,067 mm) drum diameter, 48" (1,219 mm) outer tooth diameter
- » Lower: 32" (812.8 mm) drum diameter, 38" (965.2 mm) outer tooth diameter
- » Construction: Using one inch (1") (25.4 mm) thick rolled steel with 3" (76.2 mm)
- » AR (Abrasion Resistant) teeth supported by heavy duty flange bearings

### TRACK UNDERCARRIAGE

- » Size: 385 Class
- » Length: 21'10" (6.7 m)
- » Width: 16'0" (4.9 m) wide with 10'0" (3.0 m) inside, 36" (900 mm) Triple Grouser Pads

### PIN PULLER PLATFORM

- » Included as standard with stair access
- » Hydraulic cylinder mounted on work platform

### ALPHA SYSTEM CONTROLS

- » Control system with master display has multicolored graphical module with easy to read display
- » Industry standard Allen Bradley industrial control platform for shredder and power module performance and diagnostic information
- » Fully functional automatic feed control system designed to maximize production by analyzing machine performance inputs from multiple sources
- » Tethered control box



## ALPHA 7400 ★ 2500E

<b>OUTPUT</b>	50 tons/hr. ferrous output capacity (45.5 m tons/hr.)
<b>OUTPUT SCRAP DENSITY</b>	70-75 lbs./cubic ft. (1.1-1.2 m ton/cubic meter) capable
<b>OPERATING COST/TON</b>	Less than \$20/ton

### ASSEMBLED & OPERATING DATA

	ALPHA 7400 SHREDDER MODULE	ALPHA 2500E POWER MODULE
<b>WEIGHT</b>	411,000 lbs. (186,430 kg)	59,000 lbs. (26,762 kg)
<b>LENGTH</b>	34'9" (10.57 m)	26'0" (7.9 m)
<b>WIDTH</b>	16'0" (4.88 m)	29'6" (9 m)
<b>HEIGHT</b>	29'2" (8.89 m)	18'0" (5.5 m)
<b>LOADING HEIGHT</b>	30' (6.35 m)	NA

## ALPHA 2500E POWER MODULE & CONTROLS

### PRODUCTION MOTOR

- » Manufacturer: QuadPlus
- » Model: EMD32
- » Motor Drive Type: DC Drive
- » Motor RPM: 750
- » Motor DC Voltage: 700 VDC

### MOTOR BUILDING (UPPER FLOOR)

- » Insulated twenty (20') foot (6.1 m) container with double doors on each end, partition and lighting. Positive pressure ventilation for both motor and motor room. Floor removed for motor.
- » Air Compressor: 15HP, rotary screw type

### MOTOR BUILDING (LOWER FLOOR)

- » Twenty (20') foot (6.1 m) Heavy beam construction fully enclosed insulated with lighting. Positive pressure ventilation in hydraulic room. Access doors at both ends.
- » Building will contain 150HP HPU and Foam Injection System.

### E-BUILDING

- » Insulated twenty (20') foot (6.1 m) container with service entrance doors, partitions, operator's room, MCC/PLC installed, HVAC (10 tons, 120,000 BTU/HR), lighting and outlets. Including fan, filtration and ductwork for motor building.
- » E-Building will be supported by metal support legs to enable easy cleaning and rodent control.

## OPTIONAL EQUIPMENT

### FERROUS/NON-FERROUS DRUM SEPARATION

- » Single magnet assemblies available

### INFEED CONVEYOR

- » Standalone eighty eight (88') foot steel belt utilizing CAT D4 components with fixed support structure. This device couples to 40 degree feed ramp enabling shredder loading at lower height and higher sustained feed rates.

### REMOTE DIAGNOSTIC AND PERFORMANCE DATA LINK

- » Monthly performance data and reports services available

# BUILT LIKE A TANK

*Specifications are subject to change.*



Figure 1: Alpha 7400 & 2500E DC Drive with 3TEK Downstream Separation System

## 3TEK DOWNSTREAM SEPARATION SYSTEMS

### 3TEK SINGLE DRUM MAGNET FERROUS NON-FERROUS DIVIDE

- » Drum Magnet and Heavy-duty stand: 48" (1,219 mm) diameter, 60" (1,524mm) wide permanent alternating pole magnet for improved separation
- » Shredder Product Conveyor: 60" (1,524 mm) wide by 25' (7.6 m) long with stainless steel head pulley for direct feed to drum magnet
- » Ferrous Transfer Conveyor: 36" (914 mm) wide by 20' (15.2 m) long
- » Non-Ferrous Transfer Conveyor: 36" (914 mm) wide by 40' (7.6 m) long
- » Over Band Magnet: to recover ferrous not captured by drum. Drive type: Electric

### 3TEK FERROUS PICKING STATION AND STOCK PILE CONVEYOR

- » Picking platform four (4) person with conveyor for copper and waste picking (removal)
- » Heavy duty support structure
- » Ferrous Stockpile Conveyor: 36" (914 mm) wide by 70' (21.3 m) long
- » Drive type: Electric

### 3TEK DUAL LINE NON-FERROUS ZORBA RECOVERY PLANT: 95%+ ZORBA RECOVERY

- » The 3TEK ZORBA recovery plant is designed to process ASR discharged from the magnet separation process and recover a high-quality ZORBA product, predominantly aluminum with zinc, copper & brass in small (less than 1 ½") (38 mm) and midsize (1 ½" - 3 ½") (38-89 mm) fractions.
- » Separation technologies used for 3TEK's ZORBA metal recovery:
  - EcoStar disk screen configured for 3 sizes: Less than 1 ½" (38 mm), 1 ½" to 3" (38-89 mm) and 3"+ (>89 mm)
  - Eriez Rev X Eddy Current Separator – Small & Mid-fraction
- » Conveyors and Platforming:
  - Non-Ferrous takeaway conveyor - 36" X 50' (914 mm X 15.3 m)
  - EcoStar Screen Platform and Supports
  - Eddy Current Separator Platform and Supports – 30' X 13' (9.1 X 4 m) platform 8 ½' (2.6 m) tall
  - Three (3) ASR transfer conveyors (36" X 30') (914 mm X 9.1 m) – small, medium and large fractions
  - Two (2) vibrating feeders for Eriez Eddy Current Separators



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**3TEK.com**