Lakeside Equipment, Inc.
SCREENING AND GRIT REMOVAL SYSTEMS
Screening Options

Screens can:
- Remove Material for Immediate Disposal
- Prevent Material from Permeating the Plant
- Lower Maintenance Costs for all equipment
- Have Little impact on Disposal Costs (pay me now or pay me later)

- Coarse Screens - 1 TO 1-1/2 Inch (25 – 38 mm)
- Medium Screens - 5/8 TO 3/4-Inch (16 – 19 mm)
- Fine Screens - 5/64 TO 1/2-Inch (2 – 13 mm)
Screenings Removal Volumes

Taken From WEF MOP-8 - Figure 9.7 (1992 Edition)

SCREENINGS (cu ft / mil gal)

SCREEN OPENING SPACING (inches)

MAXIMUM

AVERAGE
No Organic Material Visible
RAPTOR® Micro Strainers
Combines Three (3) Unit Processes in One (1):
- Screens 1/2-Inch And Smaller Material
- Washes Screening of Organic Material
- Compacts And Dewater Screenings

Eliminates Odors

Passes EPA Paint Filter Test

Reduces Volume By 50%

Reduces Weight By 67%
RAPTOR® Micro Strainer Designs
475+ Installations

- 2 HP Drive
- Compaction Zone
- Compaction Flush
- Screw Conveyor
- Screen Basket
- Screenings Wash
- Solenoid Manifold
- Lower Wash
- Seal Plate

6/22/17
John E. Olson - RSM
RAPTOR® Micro Strainer Screen

ALL STAINLESS STEEL
Openings – 1/4, 3/8 or 1/2-In.

1/4 In. – Standard

Nine (9) Screen Sizes:

- 24 In; 31 In; 35 IN; 40 IN
- 47 In; 55 In; 63 In; 71 In; 79 IN

1.83 To 22.83 MGD Peak Flow Capacity
RAPTOR® Fine Screen

- Compaction Flush
- Wash System Manifold
- Transport Screw
- Lower Wash
- Rake & Comb
- Screen Basket
- Seal Plate
- Screenings Wash
- Compaction Zone
- 2, 3, OR 5 HP DRIVE

6/22/17  John E. Olson - RSM
RAPTOR® Fine Screen

- LOWER WASH
- COMB
- 3-PLANE BAR RACK
- RAKE
- SCREW
Fine Screen Basket Components

- 3-PLANE
- BAR SCREEN
- ROTATING RAKE
- RAKE TEETH
- PASS THROUGH
- FULL BAR DEPTH
Rake Penetration Video
Only RAPTOR® Screen That Utilizes Rotating Screen Basket
Screen is Cleaned by Water and/or Brush
RDS Systems Available
- Wedge Wire – 0.010 TO 0.120-Inch (0.25 – 3 mm)
- Perforated Plate – 0.08 to 0.25 Inch (2 – 6 mm)
- Ten (10) Screen Sizes: 24 Inch to 78 inch Wide Channels
- Applications From 0.46 TO 25.11 MGD Peak Flow
Grit Removal Systems

Reasons To Have A Grit Removal System:

- Reduce Wear On Treatment Equipment
- Prevent Accumulation In Pipes and Channels
- Prevent Loss Of Volume of Treatment Processes
- Prevent Loss Of Digester Volume
- Minimize Sludge Disposal Costs
Grit Removal

- Inorganic Material
- Sand, Gravel, Coffee Grounds, Seeds ....
Aeroductor Grit Removal

- Perfect for Small to Medium Size Facilities
- 5 Minute Detention Time
- Reduces Forward Velocity, Allowing Grit to Settle
- Aeration Scrubs Organics from Grit
AERODUCTOR AERATED GRIT CHAMBERS
40 + Installations
Great for Medium to Large Facilities

Small Footprint at Larger Flows

Various Grit Pumps
- Airlift
- Recessed Impeller
- Self-Prime
SpiraGrit Systems - 60+ Installations

Cloudcroft NM

Sparta MI
GRIT CLASSIFIERS

- Receives Grit Slurry From Any Primary Grit Removal System
- 30 Cu Ft/Hour Grit Capacity
- Handles Flow Rates Of 135 Or 190 GPM
- Stainless Steel Construction
- Two Types – L & W
- Hundreds of Installations!
Tank-Mounted Designs are available:

- All Stainless Steel Designs
- Completely Enclosed for Odor Control
- Self-adjusting Gaskets for Covers Minimize Spillage
- Vents that Discharge Odors Out of Area can Help Control Odors
- Integral Drains and Heavy Solids Clean-outs
- Automated Tank Wash Cycles after Each Unloading Sequence Helps to Minimize Odors

Some Models are Factory Assembled, Pre-Plumbed, and Pre-wired

MADE IN THE U.S.A - Typically Required.
LIQUID PROCESSING 10%

SOLIDS PROCESSING 90%

ACME SEPTAGE CO.

SCREEN (optional)

GRIT REMOVAL (optional)

GREASE REMOVAL (optional)

STORAGE

Metering Pump

6/22/2017

JEO - Septage Collection & Treatment
Septage Acceptance Plants

Typical Layout

- INLET VALVE
- EXTERNAL ROCK TRAP
- MAGNETIC FLOW METER
- WASH WATER CONTROL
- SCREEN WITH WASHING & COMPACTION
- SCREENINGS DISCHARGE
- Discharge with pH SENSOR
Spray Wash Systems

- Factory pre-plumbed
- Pre-wired to common junction boxes
- Single plant water connection
Undesirable Septage Material

CESSPOOL ROCK

PORTA-JOHN DEBRIS

CESSPOOL ROCK

GREASE TRAP DEBRIS
- CORROSION FAILURE
- CORROSION FAILURE
- PLUGGED SCREEN
- PLUGGED SCREEN
Raptor™ Complete Plants
LAKESIDE COMPLETE PLANT

◆ COMBINES 3 UNIT PROCESSES
  ■ SCREENING
  ■ GRIT REMOVAL
  ■ GREASE REMOVAL - OPTIONAL

◆ HEADWORKS IN 0.5 MGD INCREMENTS

◆ 0.5 TO 4.0 MGD

◆ SIZE **NOT** BASED UPON SCREEN FLOW

◆ SIZE IS BASED UPON GRIT REMOVAL
Complete Plant

Combines Screening and Grit Removal into One Unit
Complete Plant - Grease Trap

- Grease Skimmer
- Grease Layer
- Grease Baffle
- Grease Skimmer Drive
- Grease Wet Well
- Grease Pump
RAPTOR® H-PAC HEADWORKS
Class I - Division 1 - Group D Electrical Environment

- Remote-Mounted Main Control Panel
- Operator Local Control Station
- Hand-Off-Auto Switches
- Forward-Off-Reverse Switches
- E-Stop and Cycle/Re-Set Pushbuttons
- NEMA 7 Explosion-Proof Enclosure

NEMA 7 Ex-Proof Enclosure
Access Control Stations

- RECEIPT PRINTER
- HMI TOUCH SCREEN
- SWIPE CARD
- USB PORT
- E-STOP
Questions and Discussion

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