



# MODEL 16ASX T/S SPECIFICATION

## 1.0 General Specifications

There will be furnished one (1) only Grind Hog™ Model 16ASX T/S Comminutor as manufactured by G.E.T. Industries, Inc. Rotation shall be in a clockwise direction

## 1.1 Design Criteria

The comminutor shall be designed to handle the flows indicated below, within the head loss noted.

- a) hydraulic capacity 3.5 MGD (13,200m<sup>3</sup>/day)
- b) satisfactory operation shall occur under conditions of zero flow
- c) head loss at peak flow shall not exceed 20 inches (508 mm)
- d) design shall be such that the flow enters the size reduction and screening device horizontally and exits vertically downward to facilitate the flushing of solids

## 1.2 Cover Plate

Shall be:

- a) of heavy-duty construction and of high quality cast iron
- b) fitted with 4 position lock down arrangement, and 2 alignment holes for repositioning following service
- c) located on, and positioned by wall mounted supports allowing for ease of removal for inspection and maintenance

## 1.3 Rotating Drum Screen

- a) heavy-duty Cast Ductile Iron ASTM 536, grade 60-45-18

## 1.4 Cutting Elements

- a) replaceable shear bars constructed of high-quality A2 tool-steel shall be attached to the rotating drum. Each shear bar shall be machined from solid bar stock, surface ground to establish exact tolerances
- b) the stationary cutting bar, shall be of high-quality 01 tool steel hardened to a minimum of 56 Rockwell C, and shall be reversible, allowing for four (4) sets of cutting edges prior to sharpening or replacement
- c) all submerged fasteners shall be of stainless steel

## 1.5 Motor

Submersible, Explosion-proof 1.5 Hp. (1.12 kw), 1750 RPM \_\_\_\_\_ volt, 3 phase, 60 HZ, rated for continuous-in-air or submerged in sewage service. Power control cable of 25 ft (7.6 m) included. Class 1, Group C and D, Division 1 Hazardous locations. The motor shall feature:

- **Frame** - rugged cast iron ASTM type A-48, class 30
- **Hardware** - 316 stainless steel

**G.E.T. INDUSTRIES INC.**

Toll Free: 877-213-7418 Email: [get@grindhog.com](mailto:get@grindhog.com) Web: [www.grindhog.com](http://www.grindhog.com)

## SPECIFICATION cont'd...

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- **Stator Insulation** - specially treated class "F" and "H" non-hydroscopic insulation with multiple dips and brakes. Phase insulation included for inverter duty
- **Rotor** - die cast aluminum, dynamically balanced. Exceeds NEMA limits per MGI - 12.06
- **Shaft** - high strength 416 stainless steel
- **Bearings** - specially adapted for vertical assembly. Both upper and lower bearings are pre-packed and sealed for life with special high temperature grease
- **Cable Entry System** - epoxy sealed butt spliced connect for non-wicking cable entry design
- **Moisture System** - two wire /two probe monitoring system constantly monitors oil chamber and stator housing for moisture
- **Seals** - tandem (dual) shaft seal system working independent of each other. Designed to withstand 100 PSI at all seal locations

### 1.6 Drive Arrangement

- a) the motor shall be close-coupled to a speed reducer drive, a heavy duty planetary gear of the totally enclosed non-vented type suitable for total submergence during emergencies
- b) double seals on the output shaft shall ensure flood-proof operation through a reduction ratio of 59:1
- c) the cycloidal reducer shall be capable of withstanding shock loads to 500% of its mechanical rating of 7.72 Hp. and be warranted for two (2) years
- d) the drive shall have a minimum full load efficiency of 90% and be pre-lubricated with grease, requiring routine maintenance every 500 to 1,000 hours

### 1.7 "Toilet Seat" Channel Mounting System

#### Option I

Shall consist of wall mounted brackets and fasteners, horizontal plate and skirt assembly, all of 304 stainless steel.

#### Option II

Shall consist of a box style structure fabricated of 304 Stainless Steel dimensioned to suit the existing channel and supported from above for ease of installation

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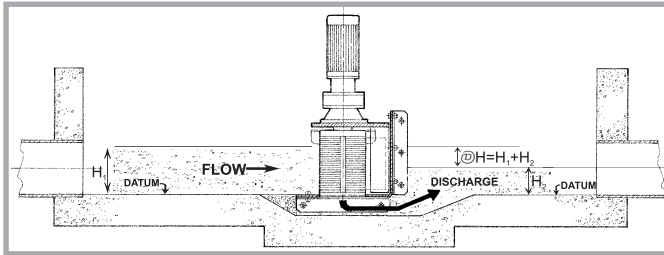
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# Grind Hog<sup>TM</sup>

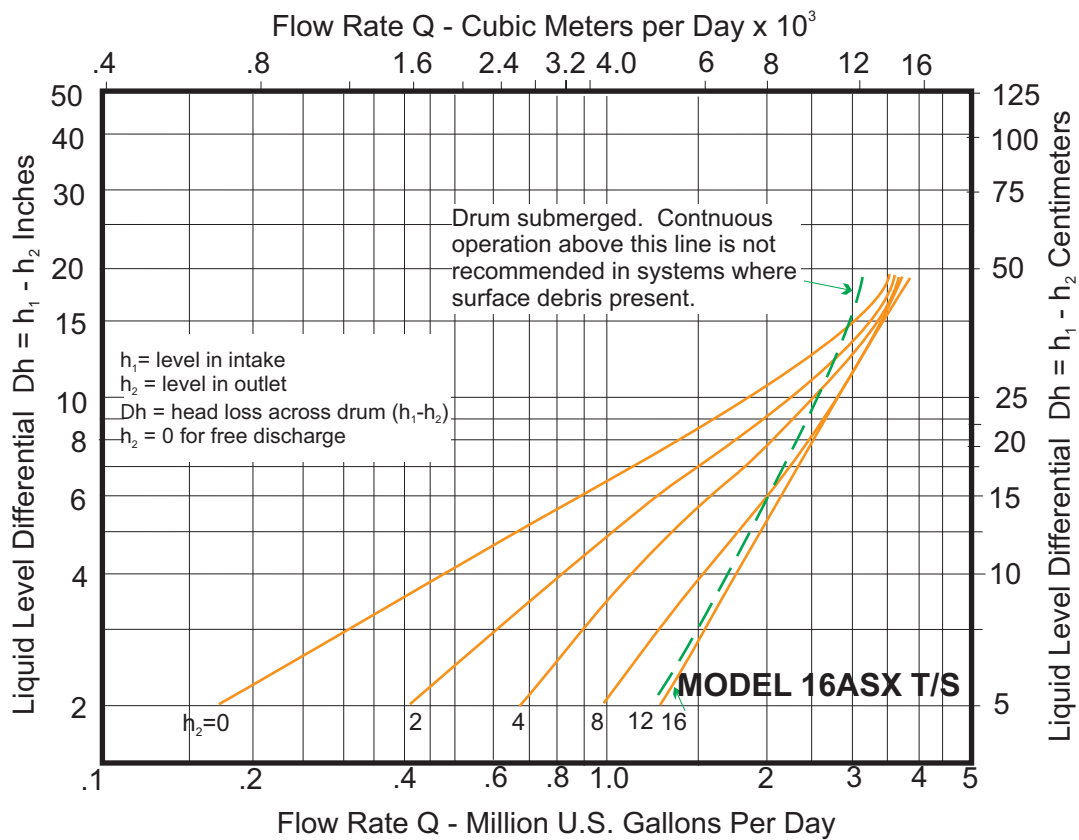
## HYDRAULIC DATA SHEET IN-CHANNEL MODEL 16ASX T/S



### GENERAL DATA

<b>Capacity</b>	0-3.5 MGD (US)	0-13200 m <sup>3</sup> /day
<b>Drum Diam.</b>	14.5 in	36.8 cm
<b>Inlet Area</b>	202 in <sup>2</sup>	1303 cm <sup>2</sup>
<b>Outlet Area</b>	121 in <sup>2</sup>	780.6 cm <sup>2</sup>
<b>Slot Width</b>	0.470 in	12 mm

### HYDRAULIC PERFORMANCE CURVE





## IN-CHANNEL MODEL 16 ASX T/S cont'd...

### DESIGN FEATURES

#### **SUMITOMO SM-CYCLO SPEED REDUCER 6000 SERIES**

- HIGHEST OVERLOAD CAPACITY FOR FREQUENT STOP-START AND SEVERE REVERSING
  - SMOOTH, SILENT OPERATION
  - EXCEPTIONAL LIFE
- Torque transmitting parts roll, don't grind.  
There is no sliding friction, so output torque/input horsepower efficiency approaches 95%

#### **STATIONARY CUTTING BAR**

- REVERSE-SPARE STANDARD EQUIPMENT
- A2 HIGH QUALITY TOOL STEEL
- HIGH RESISTANCE TO WEAR

#### **CAST DUCTILE IRON SEWAGE SCREEN**

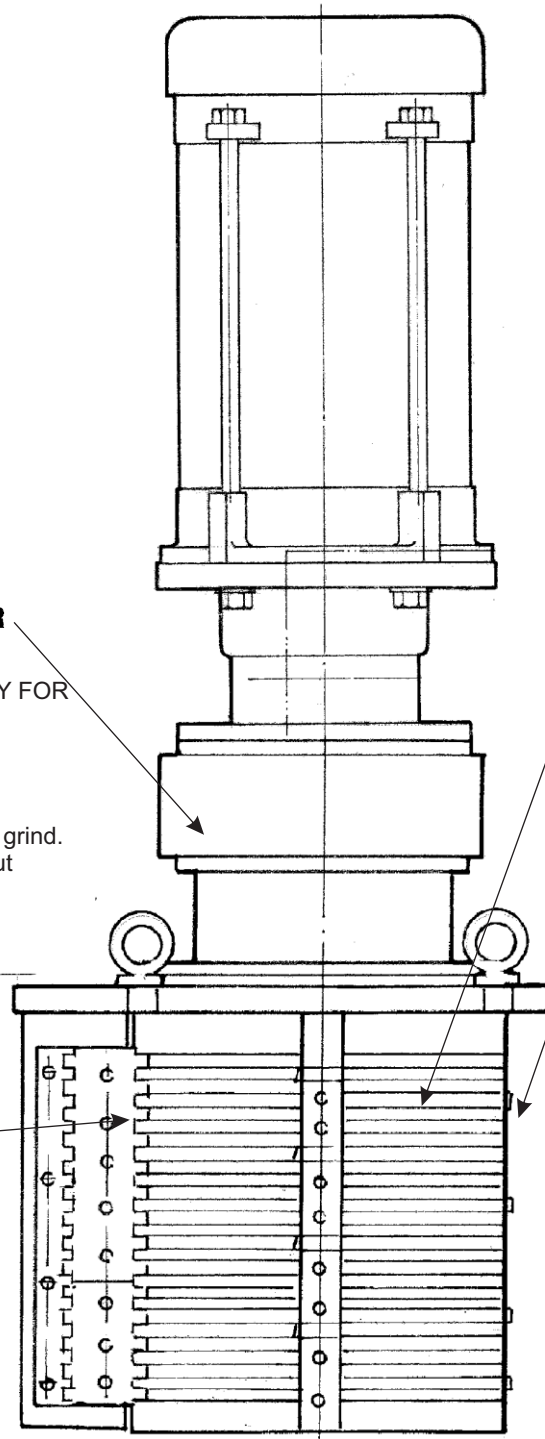
- LONG LIFE UNDER ABRASIVE CONDITIONS

#### **ROTATING SHEAR BAR ASSEMBLY**

- MACHINED FROM SOLID BARSTOCK
- PRECISE TOLERANCES MAINTAINED

#### **SUBMERGED FASTENERS OF STAINLESS STEEL**

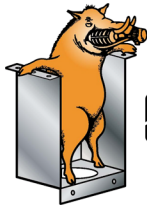
#### **HEAVY DUTY CAST IRON CONSTRUCTION**



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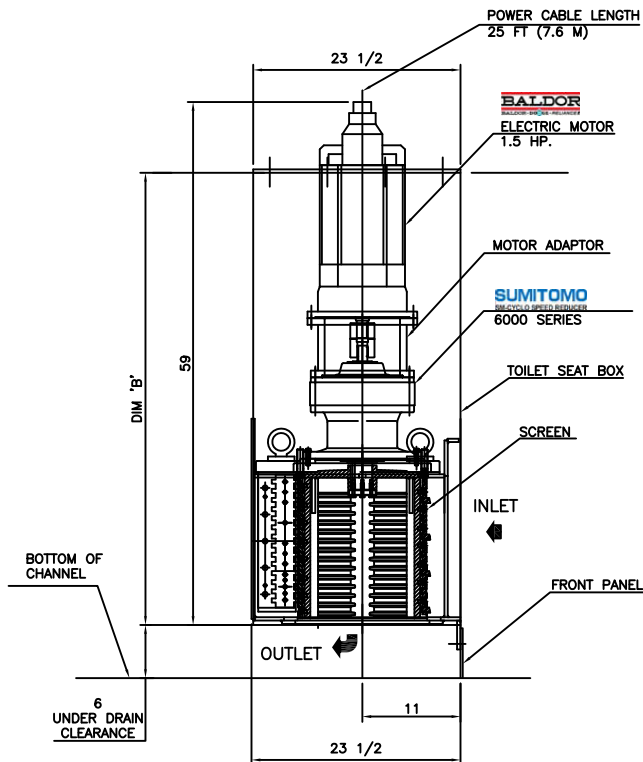


**Grind Hog™**

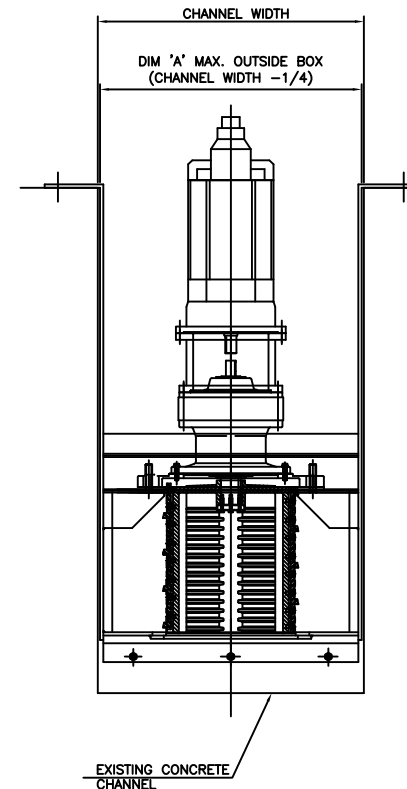
# MECHANICAL DETAIL

MODEL 16ASX T/S

SERIAL No. \_




SIDE VIEW

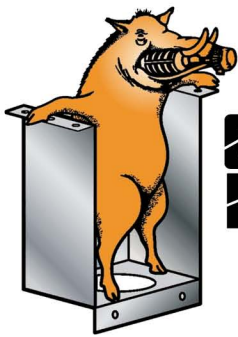


CHANNEL SECTION

ITEM	DIM 'A'	DIM 'B'
STANDARD	24 (MAX)	42 (TBA)
PROJECT	-	-

MATERIALS OF CONSTRUCTION & GENERAL ENGINEERING DATA												www.grndhog.com 1 (877) 213-7418		
HOUSING:	GREY IRON		CAPACITY	3.5 MGD (US) / 13200 m3/ day		INLET AREA	202 SQ IN		1303 cm sq		<div>TOLERANCES</div> <div>DECIMAL</div> <div>FRACTIONAL</div> <div>ANGULAR</div>	INFO INFO	BOX DISPLAYED	SCALE NTS DRAWN BY G.P. APPROVED BY W.D.M.
DRUM (SCREEN):	DUCTILE IRON (ASTM 536 GRADE 60-45-18)		DRUM SPEED	30 RPM		OUTLET AREA	121 SQ IN		780,6 cm sq					
SHEAR BARS:	AISI-A2 HIGH ALLOY TOOL STEEL		ROTATION	CLOCKWISE		DRUM DIAMETER	14,5 IN		36,8 cm					
CUTTING BARS:	AISI-01 TOOL STEEL REVERSIBLE		SLOT WIDTH	.470 IN / 12 mm		WEIGHT	750 LB		340 kg					
HARDWARE & FASTENERS:	304 STAINLESS STEEL		No. OF SLOTS	56		Toilet Seat Structure & Guide Angles 316 SS								
MOTOR MANUFACTURER:	BALDOR / RELIANCE		POWER:	- / - / -		RPM:	1750		REDUCER:	SM - CYCLO		MODEL:	V6160 / 65	
STYLE:	SUB XP C-1-A		HP:	1.5 KW: 1.12		FRAME:	180 TY		FLANGE:	180TY		RATIO:	59:1	
												RATING:	7.72 HP	
DATE	AUG. 2014		FILE NO.			DWG. No.	6 0225.1				REV.	-		

-	-	-	-
NO.	DATE	BY	REVISION
			
G.E.T. INDUSTRIES INC.			
get@grindhog.com			
www.grindhog.com			
1 (877) 213-7418			
TOLERANCES	INFO  INFO  BOX DISPLAYED		SCALE
DECIMAL			NTS
FRACTIONAL			DRIVEN BY
ANGULAR			G.P.
			APPROVED BY
			W.D.M.
DATE	FILE NO.	DWG. No.	REV.
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**Grind  
Hog**

# HORIZONTAL FLOW

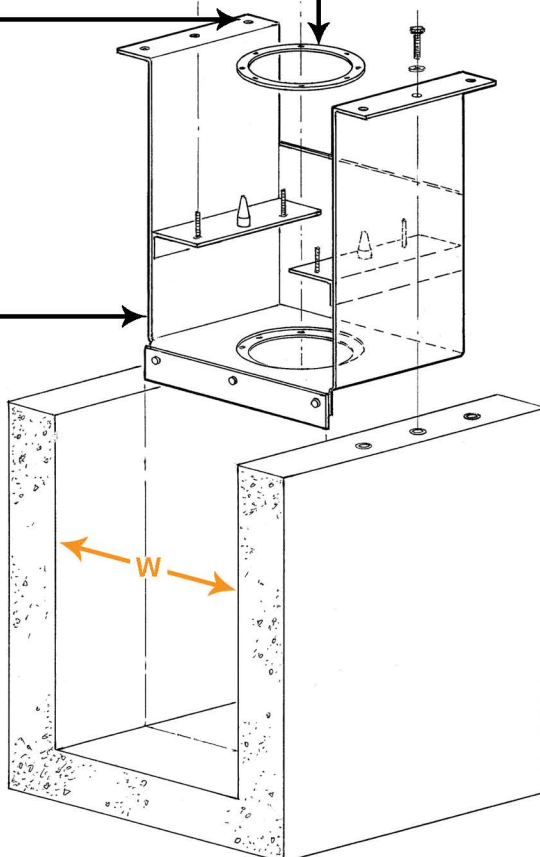
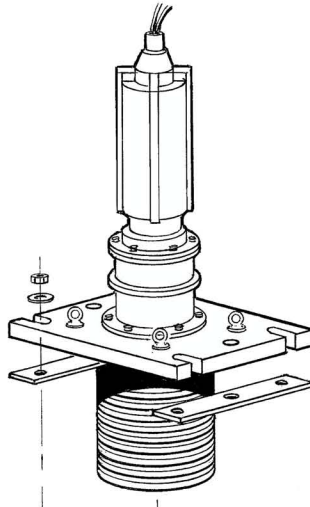
RETROFIT ALTERNATIVE

## “TOILET SEAT BOX STYLE” DROP IN REPLACEMENT

Replaceable  
wear ring for  
extended life

Supported from  
above on the  
channel walls,  
eliminating the  
requirement for  
any submerged  
anchorage

Fabricated from  
304 Stainless  
Steel to suit  
existing  
channel  
dimensions



PROJECT:

ANTICIPATED PEAK FLOW: \_\_\_\_\_

EXISTING CHANNEL:

Width (w): \_\_\_\_\_

Depth (d): \_\_\_\_\_

Underdrain Clearance (c): \_\_\_\_\_

MOTOR REQUIREMENTS:

Power: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Enclosure: \_\_\_\_\_

## REPLACING

Barminutor

Infilco Degremont

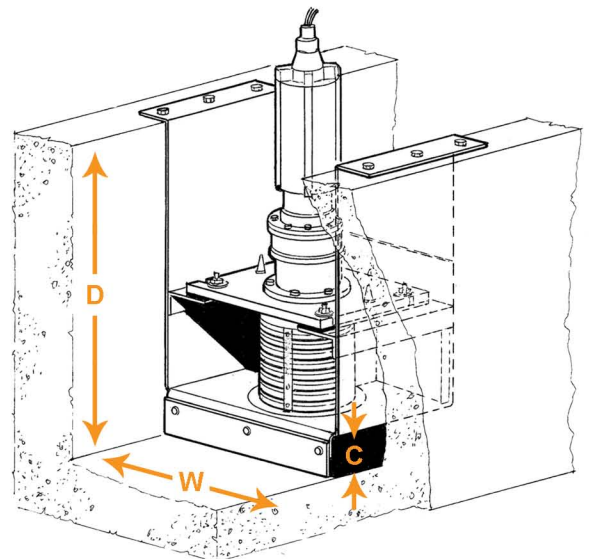
Clow Aer-O-Flo

Muffin Monster

Franklin Miller-Diminutor

Worthington

.....Among others





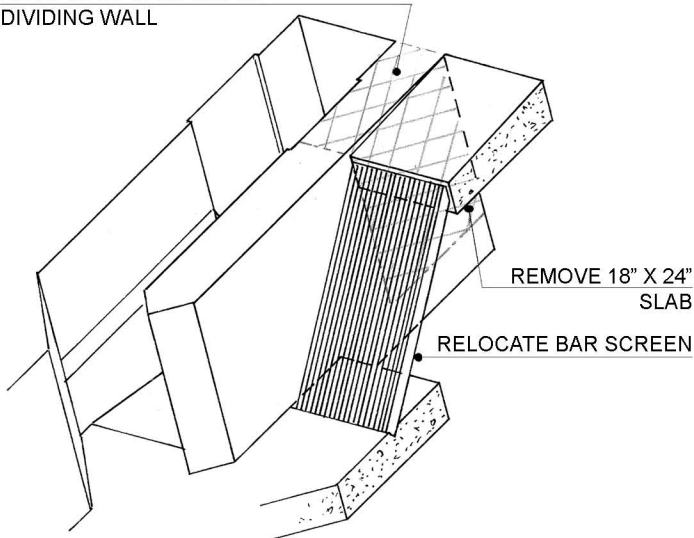
# HORIZONTAL FLOW



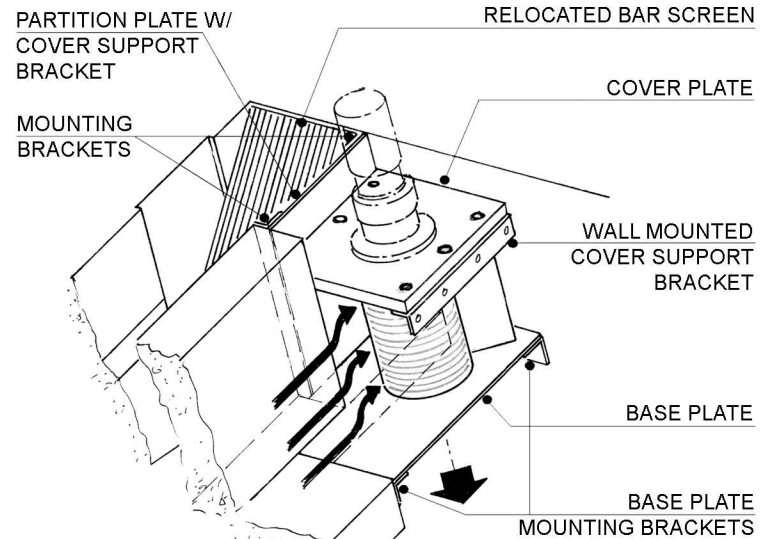
Customized to suit each application

## ORIGINAL CHANNEL

REMOVE 24" SECTION OF  
DIVIDING WALL



## PROPOSED CHANGES



Original  
Worthington 15-5



Custom Fabricated  
Basin



16 ASX T/S



Custom Fabricated Basin  
& 16ASX T/S  
Ready for Shipment