



# Mixer Data Sheet

Customer Name:	<b>Industria Infinto S.A. / Vennessa Ventures</b>	Order No:	<b>U08I003</b>
Customer Location:	<b>Costa Rica</b>	P.O. No.:	<b>INT0001</b>
Customer Equip. No:	<b>TBA</b>	Issue Date:	<b>June 26, 2008</b>
Equipment Desc.:	<b>Leach Tank Agitators</b>	Revision:	<b>0</b>
Project Name:	<b>Mina Crucitas</b>		

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<b>Unit:</b>	<b>102GTH-125-16</b>	<b>Qty:</b>	<b>5</b>	<b>Serial No:</b>	<b>U08I003-01A-E</b>
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<b>Process:</b>	Type	<b>Leach Tank Agitators</b>		
	Temperature	<b>30 deg.C</b>	Dry Solids SG	<b>2.70</b>
	Pressure	<b>Atmospheric</b>	Liquid SG	<b>1.00</b>
	Weight %	<b>30-33% w/w</b>	Max. Particle Size	<b>D99 = 250 D80 = 75</b>
	Slurry S.G.	<b>1.262</b>	93% Pure O2	
	Viscosity	<b>597-988 cP</b>	Flow rate :	<b>35-65 Nm3/hr down the shaft, 45psig design pressure with 1" Rotary Union</b>

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<b>Vessel:</b>	<b>Ø 15.0 m X 16.0 m SS, Open Top, Flat Bottom, 4 baffles @ 90deg 940mm wide X Full length. Continuous flow with Upcomer Discharge</b>
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<b>Drive:</b>	Motor:	<b>Supplied and Mounted by MixPro (MixPro Choice) 90kW (125 HP) 1750 Rpm TEFC NEMA 444T Frame 1.15 SF Under 1000mASL 460V/3p/60Hz</b>
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<b>Gear Drive:</b>	Manufacturer	<b>Hansen</b>
	Model	<b>QVPH3-UDL</b>
	Ratio	<b>79.839:1</b>
	Service Fct.	<b>1.76 Mechanical / 1.68 Thermal</b>
	Final Speed	<b>15.4Rpm</b>
<b>Belt Drive:</b>	Belts:	<b>5VX1060 (5) Belts</b>
	Driver:	<b>11.3"</b>
	Driven:	<b>16.0"</b>
	C-C:	<b>31.7"</b>
	Service Fct.:	<b>1.48</b>

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<b>Seal:</b>	<b>No Shaft Seal Is Used</b>
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<b>Mount:</b>	<b>Top Entry</b>	Location:	<b>See Dwg. L08I003-01</b>
		Method:	<b>Mounting Base (See Dwg. U08I003-01)</b>

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<b>Shaft Reducer Output:</b>	Diameter:	<b>Ø 260 mm</b>
	Length:	<b>368mm from Mounting base to Coupling CL</b>
	Material:	<b>42CrMoS4 (AISI 4150)</b>
	Coupling:	<b>Shrink-Fit to Rigid Coupling on Pipe</b>

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<b>Shaft 1:</b>	Diameter:	<b>Ø O.D. 356 mm, Ø I.D. 317 mm (14" Sch.80 Pipe)</b>
	Length:	<b>6690mm from Mounting base to Coupling CL</b>
	Material:	<b>C/S (no cover)</b>

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<b>Shaft 2:</b>	Diameter:	<b>Ø O.D. 356 mm, Ø I.D. 317 mm (14" Sch.80 Pipe)</b>
	Length:	<b>6094 mm from Coupling CL to Impeller CL</b>
	Material:	<b>C/S (no cover)</b>

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# Mixer Data Sheet

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**Upper Impeller:** Style: **MP1300SP (See Dwg. T08I003-01)**  
Diameter: **Ø 5258 mm**  
Blades: **3 Bolt-On**  
Material: **C/S with Natural Rubber 6mm & double thk. on edges**  
Attach: **Hub Welded to Pipe Shaft**  
Location: **5424 mm from mounting face to Impeller CL**

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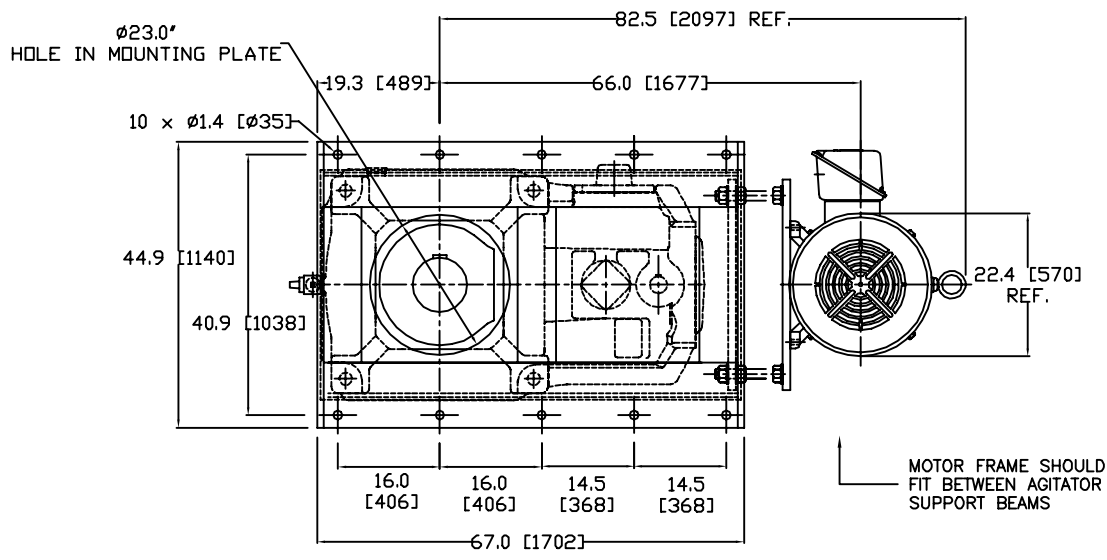
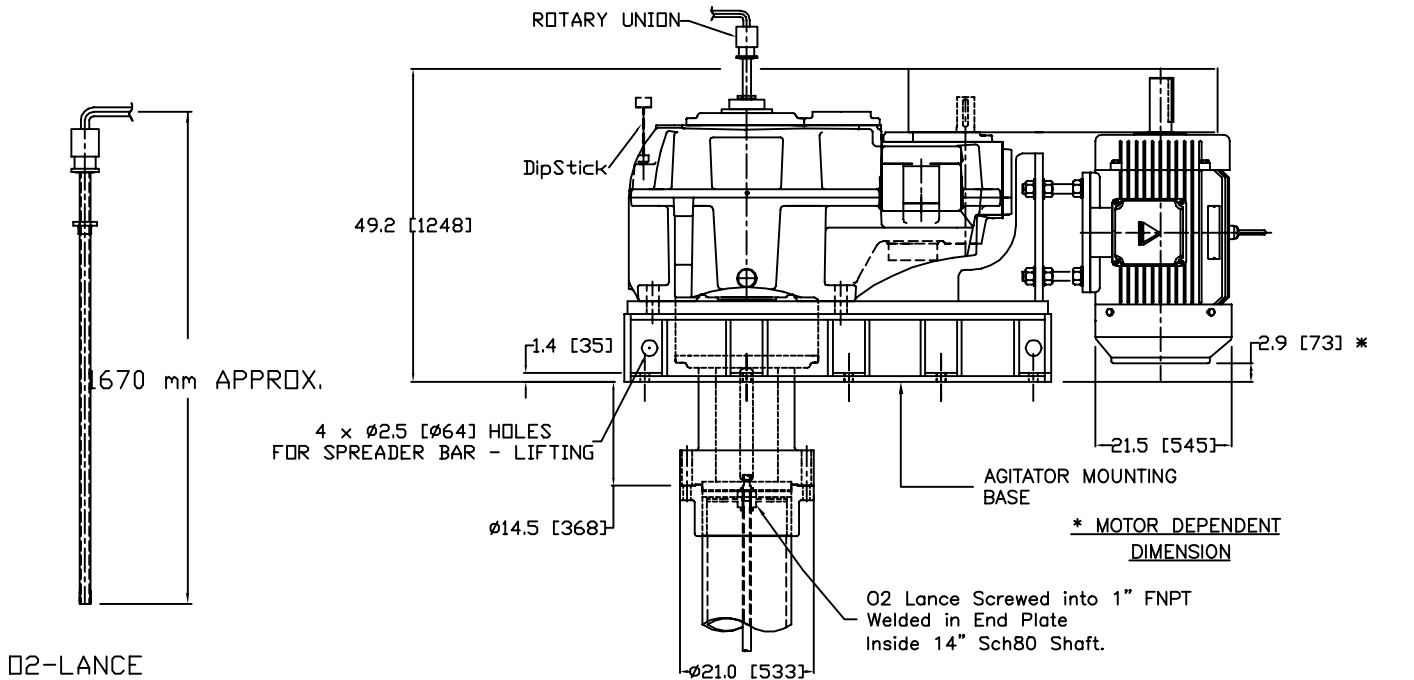
**Lower Impeller:** Style: **MP1300SP (See Dwg. T08I003-01)**  
Diameter: **Ø 5258 mm**  
Blades: **3 Bolt-On**  
Material: **C/S with Natural Rubber 6mm & double thk. on edges**  
Attach: **Hub Welded to Pipe Shaft**  
Location: **12784 mm from mounting face to Impeller CL**

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**Options:** O<sub>2</sub> Added Down the shaft thru Rotary Union, Lance pipe, 316LSS piping & Replaceable Sparger supplied by MixPro

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DRAWN TO SCALE



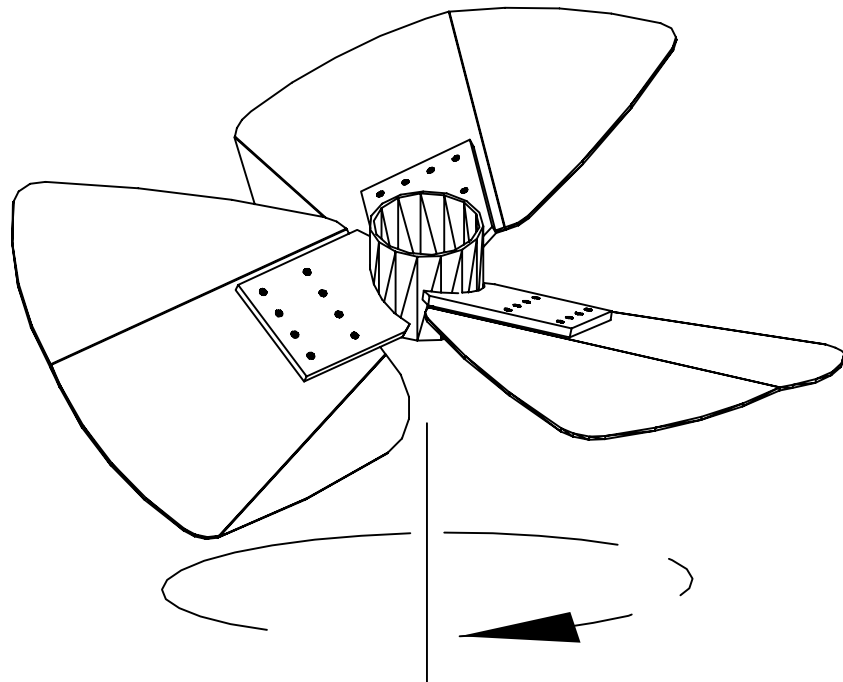
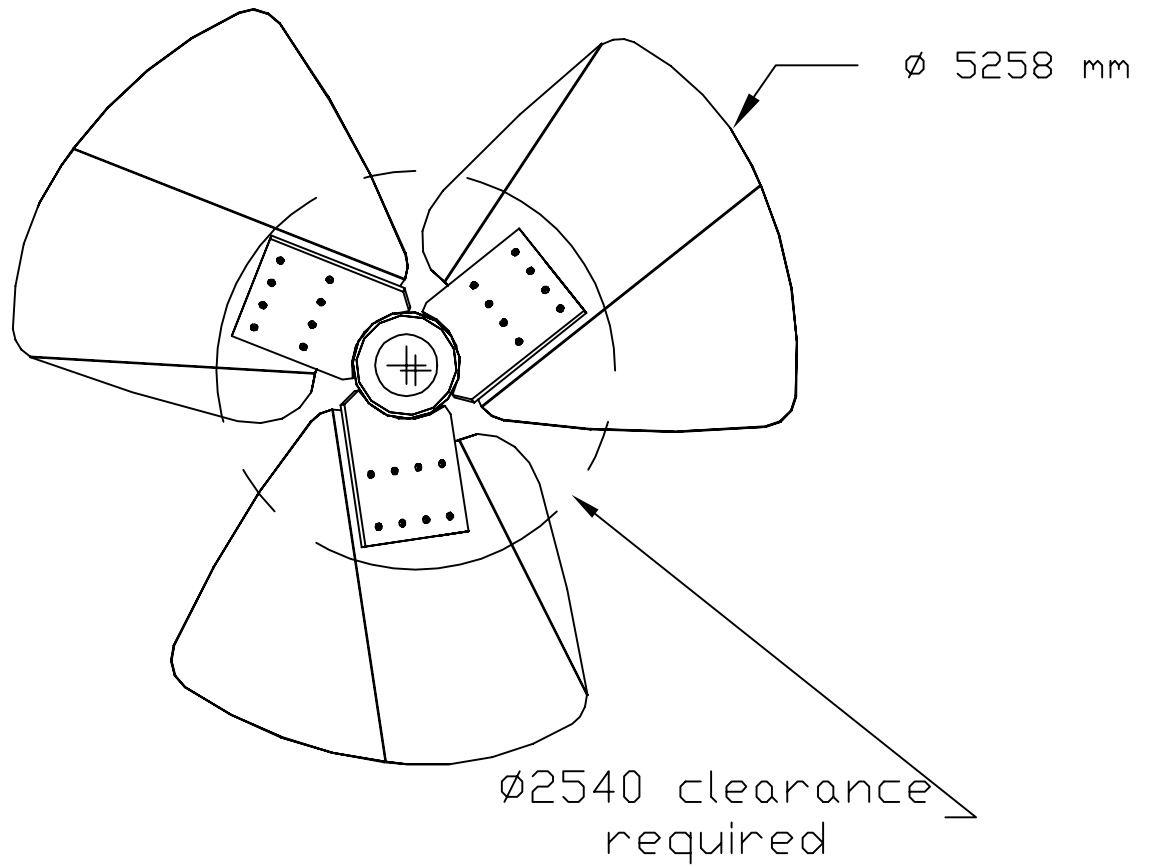
BOTTOM VIEW  
MOUNTING PLATE &  
GEARBOX & MOTOR ASSEMBLY

NOTE:

1. Dimensions are for reference only and subject to change without notice unless certified.
2. Standard mounting-base shown. Other mounting base sizes available upon request.
3. Agitator support base must be designed for agitator weight, torque & bending loads.

Equip. No.: TBA

	102GTH Unit Dimensional Drawing Industria Infinto S.A./ Vanessa Ventures, Costa Rica Leach Tank Agitators P.O.# INT0001; S/N: U08I003-01A-E	
	DIMENSIONS IN inch (mm) DATE 26-June-2008	REV. 0

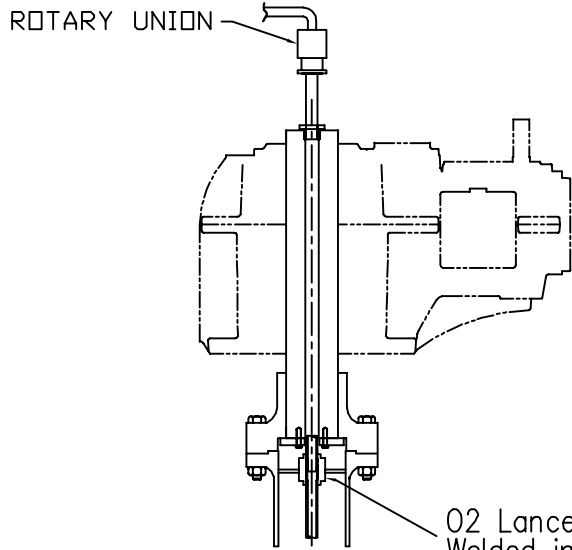


EQUIP. NO: TBA

NOTE:

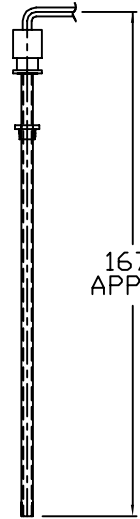
1. Identical Impeller to be used at Two (2) locations
2. Impeller O.D. includes 6mm & double thick rubber covering on the blade edges

	Ø5258 mm MP1300SP Impeller Schematic Industria Infinto S.A./ Vennessa Ventures, Costa Rica Leach Tank Agitators P.O.# INT0001; S/N: U08I003-01A-E		DWG. NO.
	DIMENSIONS IN INCHES		T08I003-01
	DATE May 22, 2008	REV. 0	



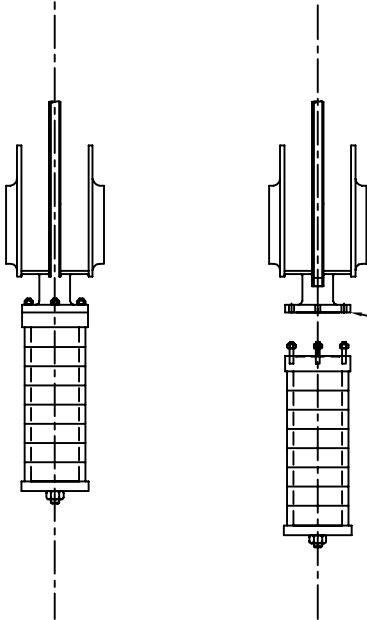
ROTARY UNION

O2 Lance Screwed into 1" FNPT  
Welded in End Plate  
Inside 14" Sch80 Shaft.

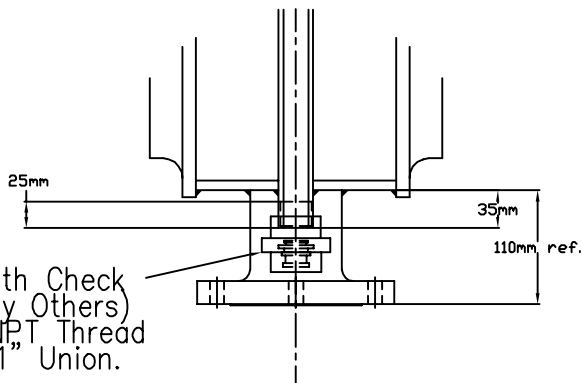


1670 mm  
APPROX.

O2-LANCE



3" 150# ANSI Drilled 316ss RF Flange  
Welded at End of Shaft for Sparger  
Attachment and Strength.



Union with Check  
Valve (By Others)  
25mm NPT Thread  
to Fit  $\varnothing$ 1" Union.

Qty: 5 LEACH TANK AGITATORS



GAS-DOWN-SHAFT SCHEMATIC DRAWING  
Industria Infinto S.A./ Vannessa Ventures, Costa Rica  
Oxygen Down Shaft Details  
P.O.# INT0001; S/N: U08I003-01A-E

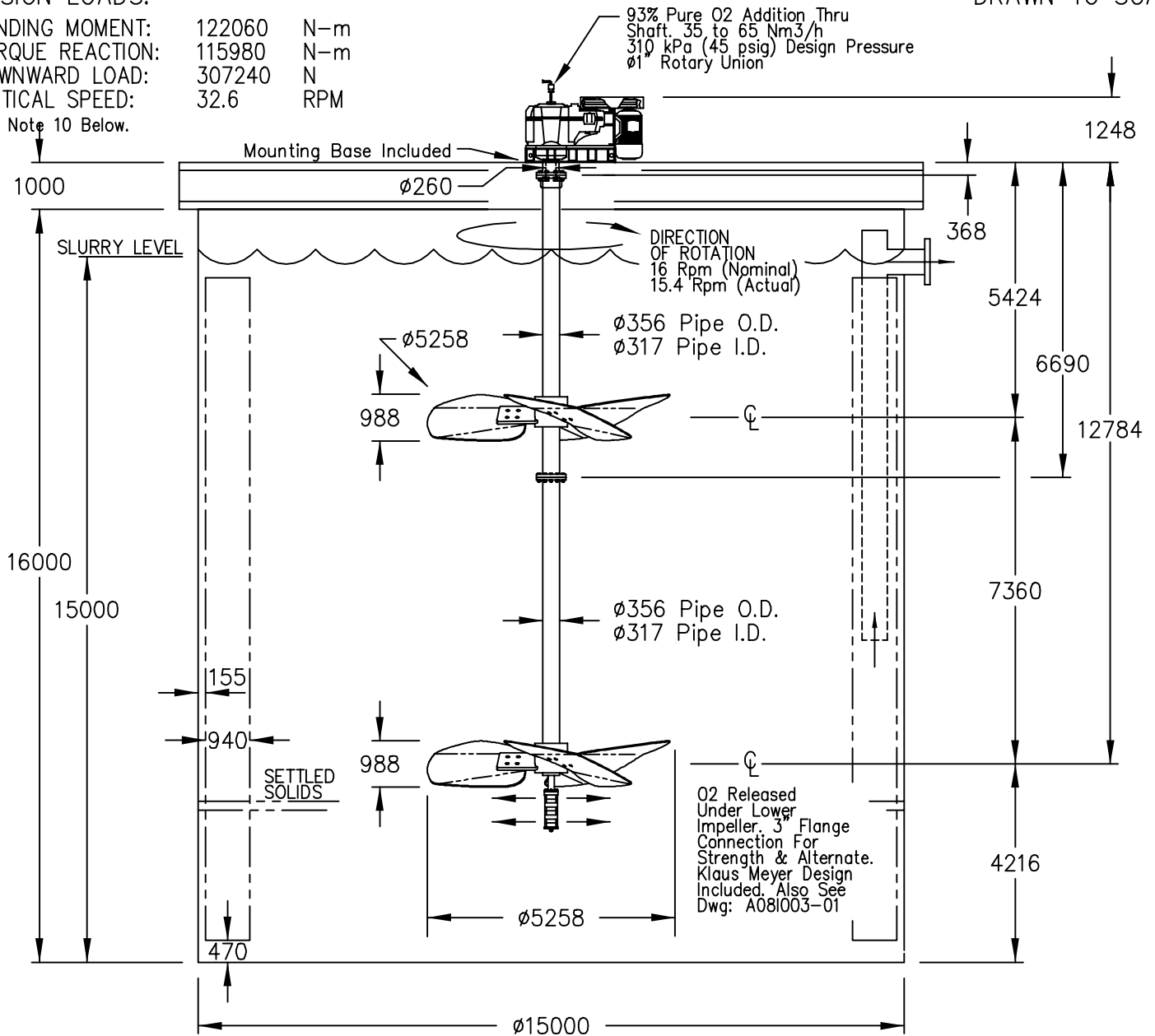
DIMENSIONS IN MILLIMETERS		DWG. NO.
DATE	REV.	A08i003-01
26-June-2008	0	

DESIGN LOADS:

BENDING MOMENT: 122060 N-m  
 TORQUE REACTION: 115980 N-m  
 DOWNWARD LOAD: 307240 N  
 CRITICAL SPEED: 32.6 RPM

See Note 10 Below.

DRAWN TO SCALE



NOTE:

- MixPro Agitator Model Number: 102GTH-125-16 w V-Belt on HSS of Hansen P4.
- Motor: 90 kW (125 HP) at 1750 Rpm, TEFC NEMA Frame 444T, Suitable for 460V/3p/60Hz Power, Under 1000 m Elevation, & 40°C Ambient. Premium Efficiency.
- Belt Drive: 11.3" to 16" Pulleys & 5VX1060(5) Belts or Equal. >1.3 RMA SF (1.48 SF) (31.7"C-C)
- Gear Reducer: Hansen P4 Model QVPH3-UDL, All Helical Gearing, Heavy-Duty Output Shaft & Bearings providing >100000 L10 hrs, Ratio 79.839:1, Mech. Gear S.F.=1.76, Oil Lubricated & Drywell.
- Seal: No Shaft Seal is Used
- Shaft: Two (2) Piece Extension Shaft 12496 mm Long, made from 14"Sch80 Seamless C/S pipe. No covering on Shaft. Impeller Hubs Welded to the Pipe Shaft.
- Impellers: (2) ø5258 mm Diameter High Efficiency Wide-Blade Hydrofoil, Type MP1300SP with Three (3) Bolt-On Blades Each. Impeller Blades Rubber Lined for Abrasion.
- Process: 1.262 SpGr Gold Ore Slurry (Saprolite Ore) having 30% to 33%w/w Solids, 1.00 Liquid SpGr, 2.70 Solids SpGr, Maximum Particle Size 250 microns. 597 to 988 cP Viscosity @5/s with Yield Stress 2.5 to 4.3 Pa. 825 Nm<sup>3</sup>/h Air or 32 Nm<sup>3</sup>/hr of 93% Pure O2 Gas Added down the Shaft. Slurry discharged through Upcomer.
- Wetted Parts: Carbon Steel. Natural Rubber Covered Blades ONLY for Abrasion
- The agitator beam support must be sufficiently rigid to prevent the agitator from vertically deflecting 7.8 mm and 1/3" deflection in any direction (ie twist). The loads shown include a suitable safety factor.

Equip. No.:

	LOCATION DRAWING Industria Infinto S.A / Vennessa Ventures, Costa Rica Leach Tank Agitators P.O.# INT0001; S/N: U081003-01A-E	
	DIMENSIONS IN MILLIMETERS DATE: June 26, 2008	DWG. NO. REV. 0 L081003-01