

[illegible]

  磨锐泵（上海）有限公司 Ensival-Moret (Shanghai) Co., Ltd		Technical Specification Centrifugal pumps Unit 03 03-MA-MC-001 Dilution Pump P0300 Unit : 03					Client :		ZGFDC			
									KERMANSHAH			
							Doc n° :		P999-03-MA-MC-001-P0300			
							Made by :		SZ		Rev.	Page
							Date :		11/10/2016		1	1
Quantity : 1												
date	rev	designation	Design	Ver.	App.	date	rev	designation	Design	Ver.	App.	
14/1/16	0	First Edition	CB	SZ	JT		3					
11/10/16	1	comments update	SZ				4					
	2						5					
PROCESS SPECIFICATIONS												
- FLUID - MAXI FLOW RATE (guarantee) - PRESSURE - TOTAL HEAD - NPSH available - MAXI ALLOWABLE pressure and temperature - RUNNING : Continuous/Discontinuous			. Type . Dry Matter . Temperature . Specific Gravity . Viscosity . Vapor pressure . Discharge . Suction . Differential			 dilluted thin stillage		% weight °C kg/m³ cPo bar abs. m³/h bar abs. bar abs. bar m of liquid m of liquid bar g./ °C				
						6% (soluble) 						
						70						
						992						
						10						
						0,312						
						50						
						3,5						
						1						
						2,5						
						25,5						
						6,6						
						6 / 100°C						
						continuous						
PUMP CHARACTERISTICS												
- Required power / Maxi brake power / Efficiency - Speed of rotation - Mini flow rate - Required NPSH - Material - Impeller - Seal type - Suction flange - Discharge flange - Supplier - Model - Construction standard - Transmission gear and coupling type - Motor : - Base plate - Total weight for complet group - Dimensional drawing / Section drawing - Test curves			. Casing / impeller . Shaft . Actual Ø, Maxi Ø . Type (open-close) . single / double . Material . O- ring . flushing (lubrication) . ND/NP . ND/NP . Supplier . Safety type . Volts . Power / Speed			(*)		kW/kW/% rpm m³/h m mm, mm Water l /mn Volts / Hz kW / rpm kg				
						1450						
						(*)						
						(*)						
						UR 55 Hyp or 316L SS						
						316L SS 						
						(*)						
						open						
						Double						
						SiC/SiC						
						(*)						
						No lost water 						
						(*) /ANSI 150 lbs RF						
						(*) /ANSI 150 lbs RF						
						(*)						
						(*)						
						ISO 2858 / ISO 5199 						
						1/2 flexible with spacer						
						(*)						
						IP 557 class F						
						400 V 3 ph. / 50 Hz						
(*)												
(*)												
(*)												
(*)												
Observations :												
 . Plots Wattelez or eq. (anti vibratory / height adjustement)  . Stainless Steel Lubrication Tank (without cooling) + support . Provide pump curves with the quotation  . Drain nozzle with plug required on pump casing for freeze protection procedure (*) : To be precised in the quotation												

			Technical Specification Centrifugal pumps Unit 03 03-MA-MC-001 Presaccharified mash pump P0331 Unit : 03				Client :		ZGFDC KERMANSHAH		
			Doc n° :		P999-03-MA-MC-001-P0331						
			Made by :		SZ		Rev.		Page		
			Date :		11/10/2016		1		1		
Quantity : 1											
date	rev	designation	Design	Ver.	App.	date	rev	designation	Design	Ver.	App.
14/1/16	0	First Edition	CB	SZ	JT		3				
11/10/16	1	comments update	SZ				4				
	2						5				
PROCESS SPECIFICATIONS											
- FLUID			. Type			Presaccharified mash					
			. Dry Matter			35% (soluble & non-soluble)			% weight		
			. Temperature			60			°C		
			. Specific Gravity			1145			kg/m³		
			. Viscosity			200			cPo		
			. Vapor pressure			0,199			bar abs.		
- MAXI FLOW RATE (guarantee)						70			m³/h		
- PRESSURE			. Discharge			6,2			bar abs.		
			. Suction			1			bar abs.		
			. Differential			5,3			bar		
- TOTAL HEAD						46,8			m of liquid		
- NPSH available						6,9			m of liquid		
- MAXI ALLOWABLE pressure and temperature						10 / 100			bar g./ °C		
- RUNNING : Continuous/Discontinuous						continuous					
PUMP CHARACTERISTICS											
- Required power / Maxi brake power / Efficiency						(*)			kW/kW/%		
- Speed of rotation						1450			rpm		
- Mini flow rate						(*)			m³/h		
- Required NPSH						(*)			m		
- Material			. Casing / impeller			UR 55 Hyp or 316L					
			. Shaft			(*)					
- Impeller			. Actual Ø, Maxi Ø			(*)			mm, mm		
			. Type (open-close)			open					
- Seal type			. single / double			Double					
			. Material			SiC/SiC					
			. O- ring			(*)					
			. flushing (lubrication)			No lost water			Water l /mn		
- Suction flange			. ND/NP			(*) /ANSI 150 lbs RF					
- Discharge flange			. ND/NP			(*) /ANSI 150 lbs RF					
- Supplier						(*)					
- Model						(*)					
- Construction standard						ISO 2858 / ISO 5199					
- Transmission gear and coupling type						1/2 flexible with spacer					
- Motor :			. Supplier			(*)					
			. Safety type			IP 557 class F					
			. Volts			400 V 3 ph. / 50 Hz			Volts / Hz		
			. Power / Speed			(*)			kW / rpm		
- Base plate						(*)					
- Total weight for complet group						(*)			kg		
- Dimensional drawing / Section drawing						(*)					
- Test curves						(*)					
Observations :											
. Plots Wattelez or eq. (anti vibratory / height ajustement)											
. Stainless Steel Lubrication Tank (without cooling) + support											
. Provide pump curves with the quotation											
. Drain nozzle required with plug on pump casing for freeze protection procedure											
(*) : To be precised in the quotation											
Non soluble DM particle size is maximum : <1.5 mm and 50% < 0,5 mm											

  磨锐泵（上海）有限公司 Ensival-Moret (Shanghai) Co., Ltd			Technical Specification Centrifugal pumps Unit 03 03-MA-MC-001 Sewage recovery pump P0350 Unit : 03				Client : Doc n° : Made by : Date :		ZGFDC KERMANSHAH P999-03-MA-MC-001-P0350 CB 14/01/2016 Rev. 0 Page 1								
date	rev	designation	Design	Ver.	App.	date	rev	designation	Design	Ver.	App.						
14/1/16	0	First Edition	CB	SZ	JT		3										
	1						4										
	2						5										
PROCESS SPECIFICATIONS																	
- FLUID - MAXI FLOW RATE (guarantee) - PRESSURE - SUCTION DEPTH (1) - TOTAL HEAD - NPSH available - MAXI ALLOWABLE pressure and temperature - RUNNING : Continuous/Discontinuous			. Type . Dry Matter . Temperature . Specific Gravity . Viscosity . Vapor pressure . Discharge . Suction . Differential			Dirty water with particles		% weight °C kg/m³ cPo bar abs. m³/h bar abs. bar abs. bar m m of liquid m of liquid bar g./ °C									
						10%											
						30											
						1021											
						20											
						0,123											
						40											
						2											
						0,7											
						1,3											
						-2											
						13											
						5,4											
						6 / 100°C											
						Discontinuous											
PUMP CHARACTERISTICS																	
- Required power / Maxi brake power / Efficiency - Speed of rotation - Mini flow rate - Required NPSH - Material - Impeller - Seal type - Suction flange - Discharge flange - Supplier - Model - Construction standard - Transmission gear and coupling type - Motor : - Base plate - Total weight for complet group - Dimensional drawing / Section drawing - Test curves			. Casing / impeller . Shaft . Actual Ø, Maxi Ø . Type (open-close) . single / double . Material . O- ring . flushing (lubrication) . ND/NP . ND/NP . Supplier . Safety type . Volts . Power / Speed			(*)		kW/kW/% rpm m³/h m mm, mm Water l /mn Volts / Hz kW / rpm kg									
						1450											
						(*)											
						(*)											
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													(*) /ANSI 150 lbs RF				
													(*) /ANSI 150 lbs RF				
													(*)				
						(*)											
						(*)											
						(*)											
						(*)											
						(*)											
						IP 557 class F											
						400 V 3 ph. / 50 Hz											
						(*)											
						(*)											
						(*)											
						(*)											
						(*)											
Observations :																	
(1) : The sewage recovery pump is installed on the ground level, and pumps liquid under ground level (-2 m) The sewage recovery pump must be provided with the suction pipe to enable the pump to operate with a liquid level under the impeller level Provide pump curves with the quotation (*) : To be precised in the quotation																	