



# Proposal Summary

Contact: Bill Poque  
 Address: IPEG  
 2800 Locust Street  
 St. Louis, MO 63103  
 Phone: 314-534-3100

Customer: Illinois Piping  
 Cust / Proj Ref:

FPD Reference: 3583-60067  
 Date: October 16, 2006

## Primary Selection Summary

Item No.	Qty	Capacity (USgpm)	Head (ft)	Pump / Stage(s)	Driver	Material	Total Price (US \$)		Leadtime (weeks)
							Pump	Motor	
Deaerator Feed Pump	2	305.00	190.00	2K3x2-82RV M3 ST / 1	25.0 hp / 18.6 kW	D4	18862	2482	REFER

Proposal Total : Pumps                    US \$ 18862  
    Motors                                    US \$ 2482

**Grand Total : US \$ 21344**

**Comments:**

- 1) Attn: Jeff Lewis 309-674-6700 (-9071)
- 2) Regards,
- 3) Bill Pogue

Prices may be subject to exchange rate fluctuations. Proposal is valid for 60 days.  
 Flowserve Standard Domestic Terms and Conditions (form P-736 2/01) apply unless otherwise specified herein.



**Pricing Sheet /  
Scope of supply**

Customer: Illinois Piping  
 Cust / Proj Ref:  
 Item Number: Deaerator Feed Pump  
 Service:

Contact: Bill Pogue  
 Address: IPEG  
 2800 Locust Street  
 St. Louis, MO 63103  
 Phone: 314-534-3100

Pump / Stg: 2K3x2-82RV M3 ST / 1  
 Curve Number: MIII8360AV  
 FPD Reference: 3583-60067  
 Date: Oct 16, 2006

Qty	Description	Average Unit Price	Extended Price
2	2K3x2-82RV M3 ST FPD - D4 Packaging by Chesapeake Alloy Surcharge / Chesapeake Crane Single Cartridge Seal Crane Type 5611 O-Ring Carbon Rotary vs. SilCar Seat Viton Elastomers 316SS Metal Parts 316SS Small Bore Gland Cover - FMS Gland Provided By Seal Manufacturer ANSI Plan 7311 Seal Flush 1/2" .035 Wall Tube Tube Fittings FPD Choice 316SS - Seal Flush Material Casing - 316SS (D4/CF8M) Cover - 316SS (D4/CF-8M) Cover Gasket - TM Impeller - 316SS (D4/CF-8M) Impeller trimmed to 7.44" Impeller Gasket - TFR Bearing Housing - CI Bearing Housing Adapter - DCI2 Bearing Housing Foot - CI Shaft - Standard Shaft - ZH Steel w/316SS Butt Weld Stud B7TF / Nut SRTF (Steel-TFE Coated) Casing - Standard 150# FF ANSI Drilling 1/2" NPT Casing Drain Tap (Plugged) No Suction Tap 1/4" NPT Discharge Tap (Tap 3) Plastic Flange Covers ISO 1940 G6.3 Impeller Balance Power End - ANSI 3A Oil Lubricated Bearings	US \$ 9431	US \$ 18862

\*\* - additional pricing to follow      Feature quantities match pump quantity unless otherwise noted.      1 of 3  
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Customer: Illinois Piping  
 Cust / Proj Ref:  
 Item Number: Deaerator Feed Pump  
 Service:

Pump / Stg: 2K3x2-82RV M3 ST / 1  
 Curve Number: MIII8360AV  
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1" Sight Gage Only (No Oiler) Oiler/Sight on Rgt Side-Viewed From Cplg Oil Seals - Inpro VBXX BZV Brg Hsg - Magnetic Drain Plug 3.5" Coupling Spacer Rexnord Coupling Omega Type ES30 w/Taper Lock Hubs Type A - Foundation Baseplate 258 Baseplate Steel - Baseplate Polybloc - Driver Mounting Steel - Fasteners Std. Steel Cplg Guard (Safety Yellow) 10 Min Non-Wit Hydro Test-Csg & Cvr Only Paint - Plant Standard Paint - Entire Pump & Base, Less Casing Paint Over Standard Flowserve Primer One Coat of Paint (4-6 mils DFT) No Customer Inspection Standard Domestic Packaging (6 Months) No Documentation Required Nameplate w/US Customary Units		
2 Driver Driver Mounted to Base by Factory NEMA Motor USEM TEFC, PE Hostile Dty CTE [25.0 hp 3600 RPM 284TS] 230/460 Volts No Space Heaters	US \$ 1241	US \$ 2482

Total: US \$ 10672

US \$ 21344

## Options

\*\* - additional pricing to follow

Feature quantities match pump quantity unless otherwise noted.

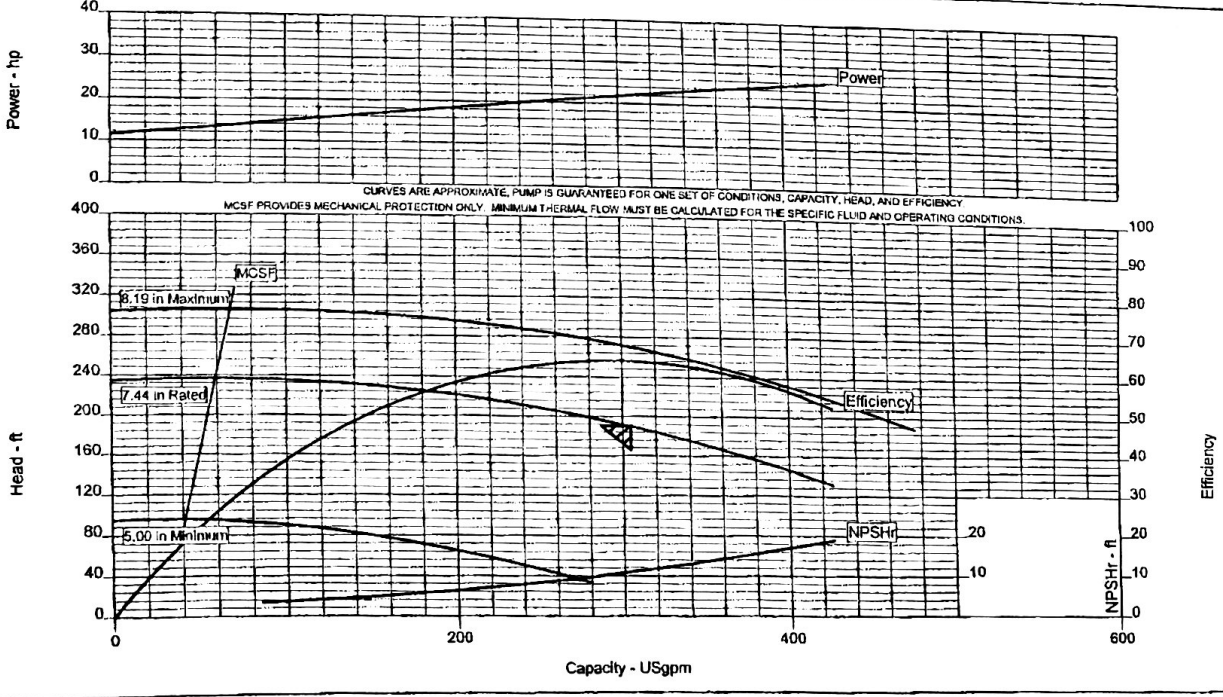
2 of 3

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Customer	: Illinois Piping	Pump / Stages	: 2K3x2-82RV M3 ST / 1
Customer reference	:	Based on curve no.	: MIII8360AV
Item number	: Deerator Feed Pump	Vendor reference	: 3583-60067
Service	:	Date	: October 16, 2006

Operating Conditions		Materials / Specification	
Capacity	: 305.0 USgpm	Material column code	: D4
Water capacity (CQ=1.00)	: -	Pump specification	: ANSI B73.1M
Normal capacity	: -	<b>Other Requirements</b>	
Total Developed Head	: 190.00 ft	Hydraulic selection : No specification	
Water head (CH=1.00)	: -	Construction : No specification	
NPSH available (NPSHa)	: Ample	Test tolerance : Hydraulic Institute Level A	
NPSHa less NPSH margin	: -	Driver Sizing : Max Power(MCSF to EOC) w/o SF	
Maximum suction pressure	: 0.0 psig	Seal configuration : Single Seal	
<b>Liquid</b>			
Liquid type	: Other		
Temperature / SG	: 200 °F / 0.962		
Solids diameter	: -		
Viscosity / Vapor pressure	: 1.0 cSt / -		

Performance			
Hydraulic power	: 14.08 hp	Impeller diameter	
Pump speed	: 3550 rpm	Rated	: 7.44 in
Efficiency (CE=1.00)	: 64.0 %	Maximum	: 8.19 in
		Minimum	: 5.00 in
NPSH required (NPSHr)	: 11.1 ft	Suction specific speed	: 9960 US units
Rated power	: 22.0 hp	Minimum continuous flow	: 61.3 USgpm
Maximum power	: 25.9 hp	Maximum head @ rated dia	: 234.9 ft
Driver power	: 25.0 hp / 18.6 kW	Flow at BEP	: 293.6 USgpm
Casing working pressure	: 97.8 psig	Flow as % of BEP	: 103.9 %
(based on shut off @ cut dia)		Efficiency at normal flow	: -
Maximum allowable	: 235.0 psig	Impeller dia ratio (rated/max)	: 90.8 %
Hydrostatic test pressure	: 413.0 psig	Head rise to shut off	: 23.7 %
Est. rated seal chamb. press.	: -	Total head ratio (rated/max)	: 70.3 %

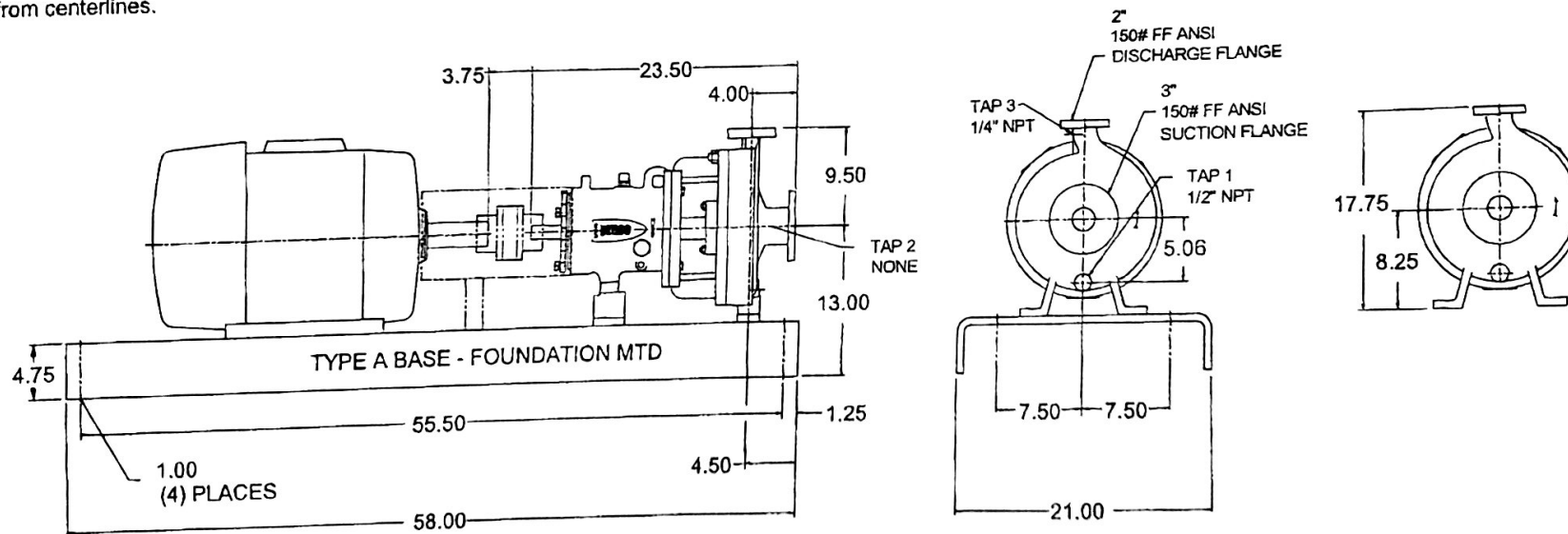


Dimensions certified for construction when properly endorsed below. Refer to factory for any "\*\*\*" dimensions. **DO NOT SCALE DRAWING**

**NOTES:**

1. Consult pump I.O.M. before installing the pump.
2. Installation dimensions are +/- .13" (3mm), unless otherwise noted.
3. Foundation bolts and piping should not be set rigidly before receipt of equipment.
4. Allow a minimum of .75" (19mm) under baseplate for adjustment and grouting.
5. All holes in flanges are offset from centerlines.

6. Piping, foundations, and systems are the responsibility of others. Flowserve Pump Division data and comments are offered as an aid, but Flowserve Pump Division cannot assume responsibility for the system design or operation. It is recommended that a specialist skilled in this area be consulted to ensure a successful installation.
7. Dimension shown from bottom of base to centerline of pump includes any blocks under pump, as necessary.



All dimensions are in inches unless otherwise specified

Customer	: Illinois Piping	Pump size & type	: 2K3x2-82RV M3 ST	Drawing number	
Item number	: Deaerator Feed Pump	Pump speed / Stages	: 3550 rpm / 1	Date	: October 16, 2006
Service	:	Flow / Head	: 305.0 USgpm / 190.00 ft	Certified by / Date :	
Customer PO #	:	Driver power / Frame	: 25.0 hp / 18.6 kW / 284TS	Seal type	: 5611 Bel
Vendor reference	: 3583-60067 Rev. A	Volts / Phase / Hz	: 230/460 / 3 / 60	Seal flush plan	: API Plan 11