



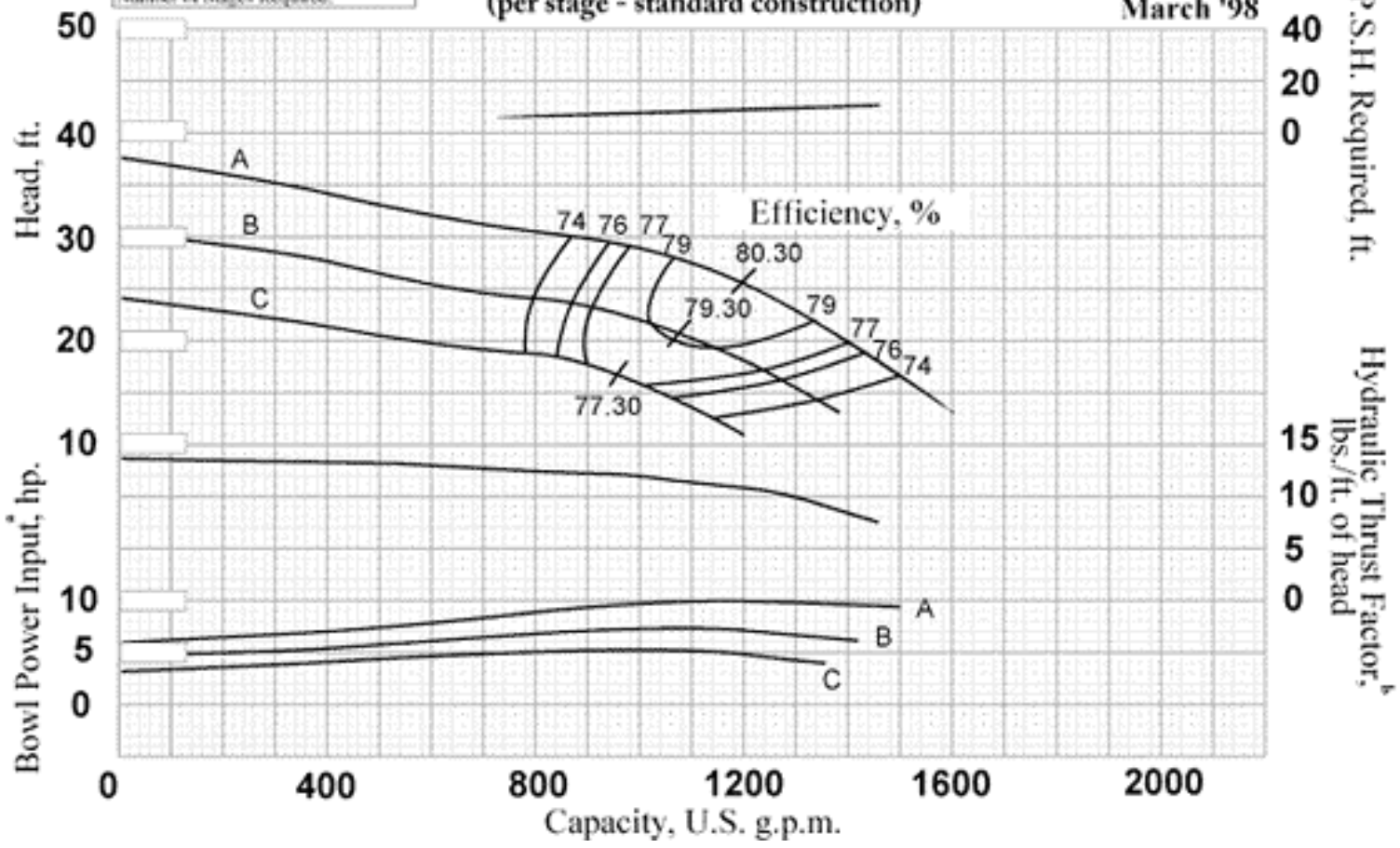
Performance Curves

12-X-180
1170 RPM

Number of Stages Required:

(per stage - standard construction)

March '98



12-X-180 1170 RPM

Impeller Data						Bowl Data	
Impeller Model	12-X-180					Bowl Model	12-X
Type	Enclosed					Connection Type	Bolted
Diameter: A=	10.030"					Outside Diameter: nominal	12.125"
B=	9.330"					minimum	11.850"
C=	8.630"					Column Pipe Size: minimum	8"
Hydraulic Thrust Factor	10.7 lbs/ft of head @ peak efficiency					maximum	10"
Impeller Weight	20.1#					Suction Pipe Size	10"
Number of Vanes	8					Shaft Size: standard	1.687"
Specific Speed (Ns)	3587					maximum	Consult Factory
Effective Eye Area	30.9 in²					Lateral: standard	1.000"
W (r sq.)	0.95 lbs -ft²					maximum	Consult Factory
Eye Fluid Velocity	0.01 ft/sec/gpm					Shaft Bearing Clearance	0.010"
Peripheral Velocity	5.11 ft/sec/inch of impeller diameter					Impeller Skirt Clearance	0.015"
						Maximum Sphere Size	0.800"
Efficiency Correction for Impeller Data						*Maximum Head @ 1.0 s.g.:	
Number of Stages	1	2	3	4	5+	with nominal outside dia.	693 ft
Deduct No. Points	4	3	2	1	0	with minimum outside dia.	530 ft
Lengths				Operational			
Column Adapter	1.500"		Minimum Required Submergence			Consult Factory	
Discharge Case	4.750"		Standard Construction Materials				
Bowl	10.000"		Bowl			A48-30 c.i. (porcelain)	
Suction Case	11.500"		Impeller			C83800 br.	
Suction Bell	9.500"		Bowl Shaft			416 stainless steel	
Submersible Motor Adapter	Consult Factory		Shaft Coupling			C1215 steel	
Approximate Shipping Weights				Lock Collet			C1215 steel
First Stage	261#		Cap Screw			grade 5	
Additional Stage	97#		Bowl Bearing			C93200 br./buna-N A40	
				Suction/Submersible Motor Adapter Bearing			C93200 br.
Miscellaneous				Throttle Bearing			C93200 br.
Hub Projection on Bell Suction	2.000"		Sand Collar			C93200 br.	
Cable Guard Height	0.500"		Column Adapter/Discharge Case/Suction Case			A48-30 c.i.	
Distance from Impeller Eye to Bottom of Bell Suction	7.875"		Submersible Motor Adapter			A48-30 c.i.	
			Tube Adapter			cl. 65-45-12 ductile iron	

* Not valid for submersible applications -- o-rings required if the maximum operating head will exceed 500'