



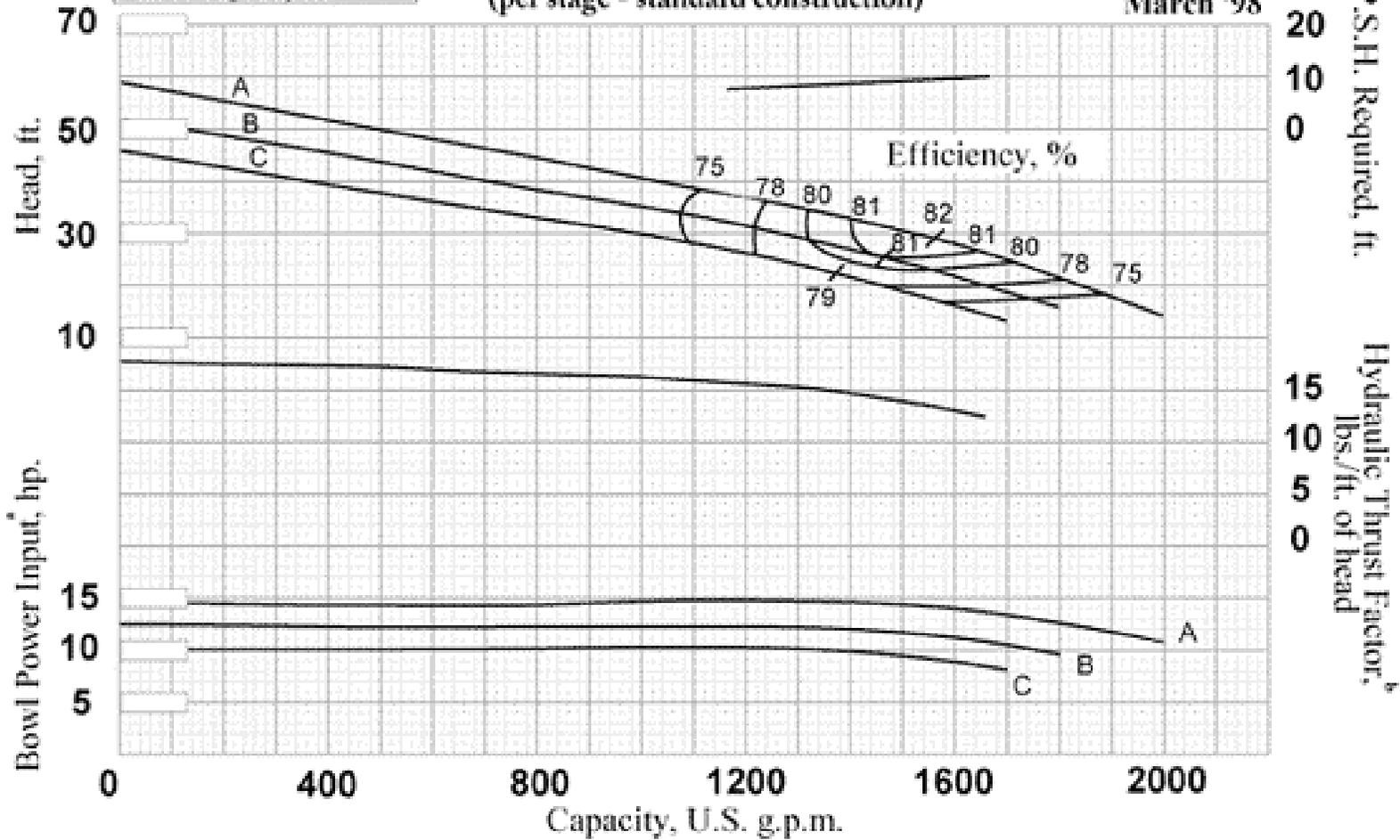
Performance Curves

14-M-230
1170 RPM

Number of Stages Required:

(per stage - standard construction)

March '98



14-M-230 1170 RPM

Impeller Data						Bowl Data	
Impeller Model	14-M-230					Bowl Model	14-M
Type	Enclosed					Connection Type	Bolted
Diameter: A=	11.615"					Outside Diameter: nominal	14.562"
B=	11.115"					minimum	14.300"
C=	10.615"					Column Pipe Size: minimum	10"
Hydraulic Thrust Factor	13.47 lbs/ft of head @ peak efficiency					maximum	12"
Impeller Weight	28.1#					Suction Pipe Size	12"
Number of Vanes	5					Shaft Size: standard	2.187"
Specific Speed (Ns)	3727					maximum	Consult Factory
Effective Eye Area	41.9 in ²					Lateral: standard	1.000"
W (r sq.)	2.300 lbs -ft ²					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	1.250"
Efficiency Correction for Impeller Data						*Maximum Head @ 1.0 s.g.:	
Number of Stages	1	2	3	4	5+	with nominal outside dia.	533 ft
Deduct No. Points	4	3	2	1	0	with minimum outside dia.	512 ft
Lengths			Operational				
Column Adapter	1.500"		Minimum Required Submergence			Consult Factory	
Discharge Case	5.375"		Standard Construction Materials				
Bowl	13.375"		Bowl	A48-30 c.i. (porcelain)			
Suction Case	11.875"		Impeller	C83800 br.			
Suction Bell	9.625"		Bowl Shaft	416 stainless steel			
Submersible Motor Adapter	Consult Factory		Shaft Coupling	C1215 steel			
Approximate Shipping Weights			Lock Collet	C1215 steel			
First Stage	405#		Cap Screw	grade 5			
Additional Stage	163#		Bowl Bearing	C93200 br./buna-N A40			
			Suction/Submersible Motor Adapter Bearing	C93200 br.			
Miscellaneous			Throttle Bearing	C93200 br.			
Hub Projection on Bell Suction	1.000"		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	9.500"		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'

14-M-230 1170 RPM

Impeller Data						Bowl Data	
Impeller Model	14-M-230					Bowl Model	14-M
Type	Enclosed					Connection Type	Bolted
Diameter: A=	11.615"					Outside Diameter: nominal	14.562"
B=	11.115"					minimum	14.300"
C=	10.615"					Column Pipe Size: minimum	10"
Hydraulic Thrust Factor	13.47 lbs/ft of head @ peak efficiency					maximum	12"
Impeller Weight	28.1#					Suction Pipe Size	12"
Number of Vanes	5					Shaft Size: standard	2.187"
Specific Speed (Ns)	3727					maximum	Consult Factory
Effective Eye Area	41.9 in ²					Lateral: standard	1.000"
W (r sq.)	2.300 lbs -ft ²					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	1.250"
Efficiency Correction for Impeller Data						*Maximum Head @ 1.0 s.g.:	
Number of Stages	1	2	3	4	5+	with nominal outside dia.	533 ft
Deduct No. Points	4	3	2	1	0	with minimum outside dia.	512 ft
Lengths			Operational				
Column Adapter	1.500"		Minimum Required Submergence			Consult Factory	
Discharge Case	5.375"		Standard Construction Materials				
Bowl	13.375"		Bowl	A48-30 c.i. (porcelain)			
Suction Case	11.875"		Impeller	C83800 br.			
Suction Bell	9.625"		Bowl Shaft	416 stainless steel			
Submersible Motor Adapter	Consult Factory		Shaft Coupling	C1215 steel			
Approximate Shipping Weights			Lock Collet	C1215 steel			
First Stage	405#		Cap Screw	grade 5			
Additional Stage	163#		Bowl Bearing	C93200 br./buna-N A40			
			Suction/Submersible Motor Adapter Bearing	C93200 br.			
Miscellaneous			Throttle Bearing	C93200 br.			
Hub Projection on Bell Suction	1.000"		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	9.500"		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'