



# Performance Curves

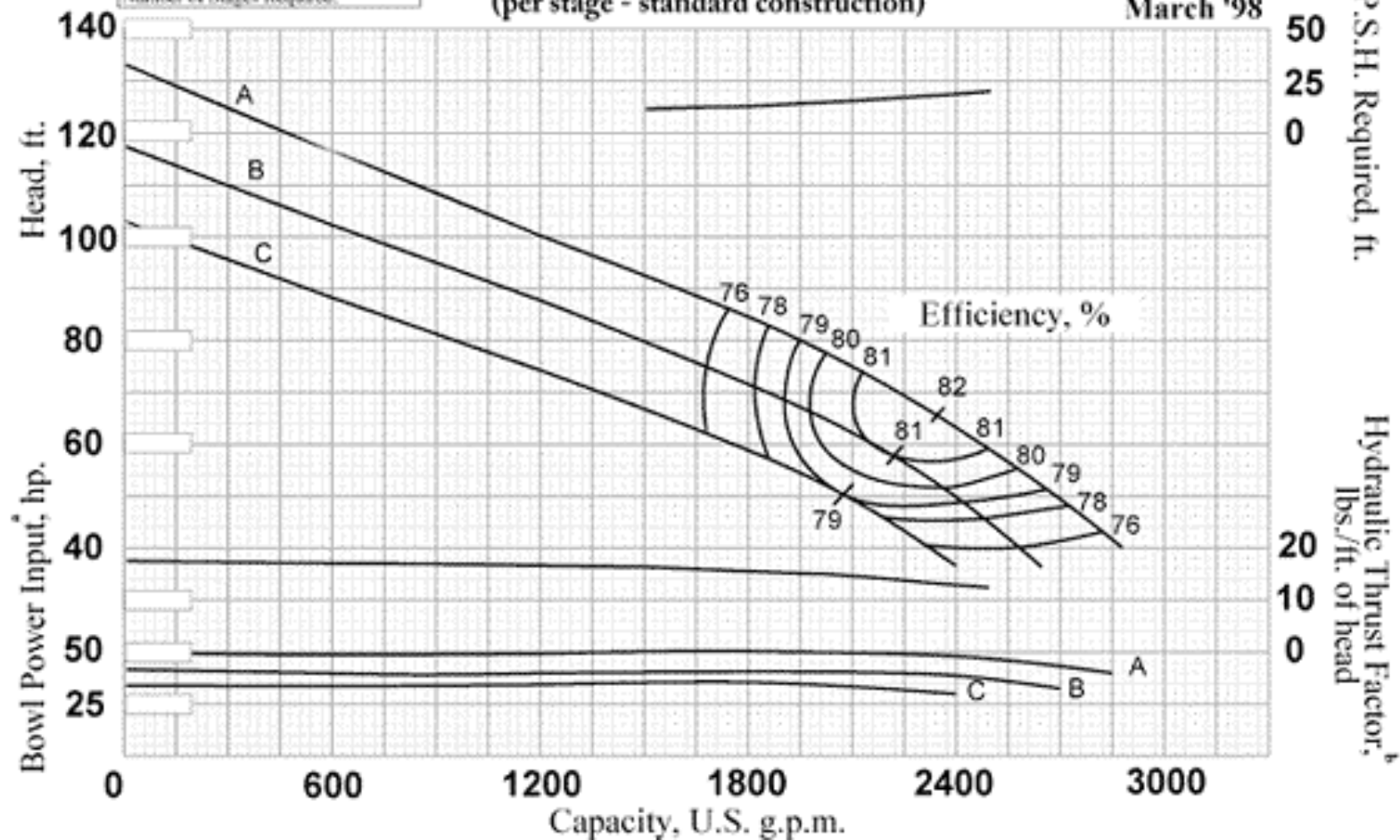
14-M-230

1760 RPM

Number of Stages Required:

(per stage - standard construction)

March '98



## 14-M-230 1760 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 in²                               |   |   |   |    | Lateral: standard         | 1.000"          |
| W (r sq.)                               | 0.230 lbs -ft²                         |   |   |   |    | maximum                   | Consult Factory |
| Eye Fluid Velocity                      | 0.01 ft/sec/gpm                        |   |   |   |    | Shaft Bearing Clearance   | 0.010"          |
| Peripheral Velocity                     | 7.68 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'