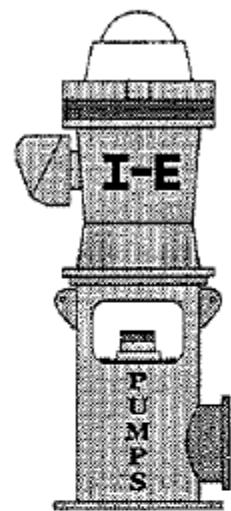


ONE  
STAGE STAGE

HEAD IN FEET

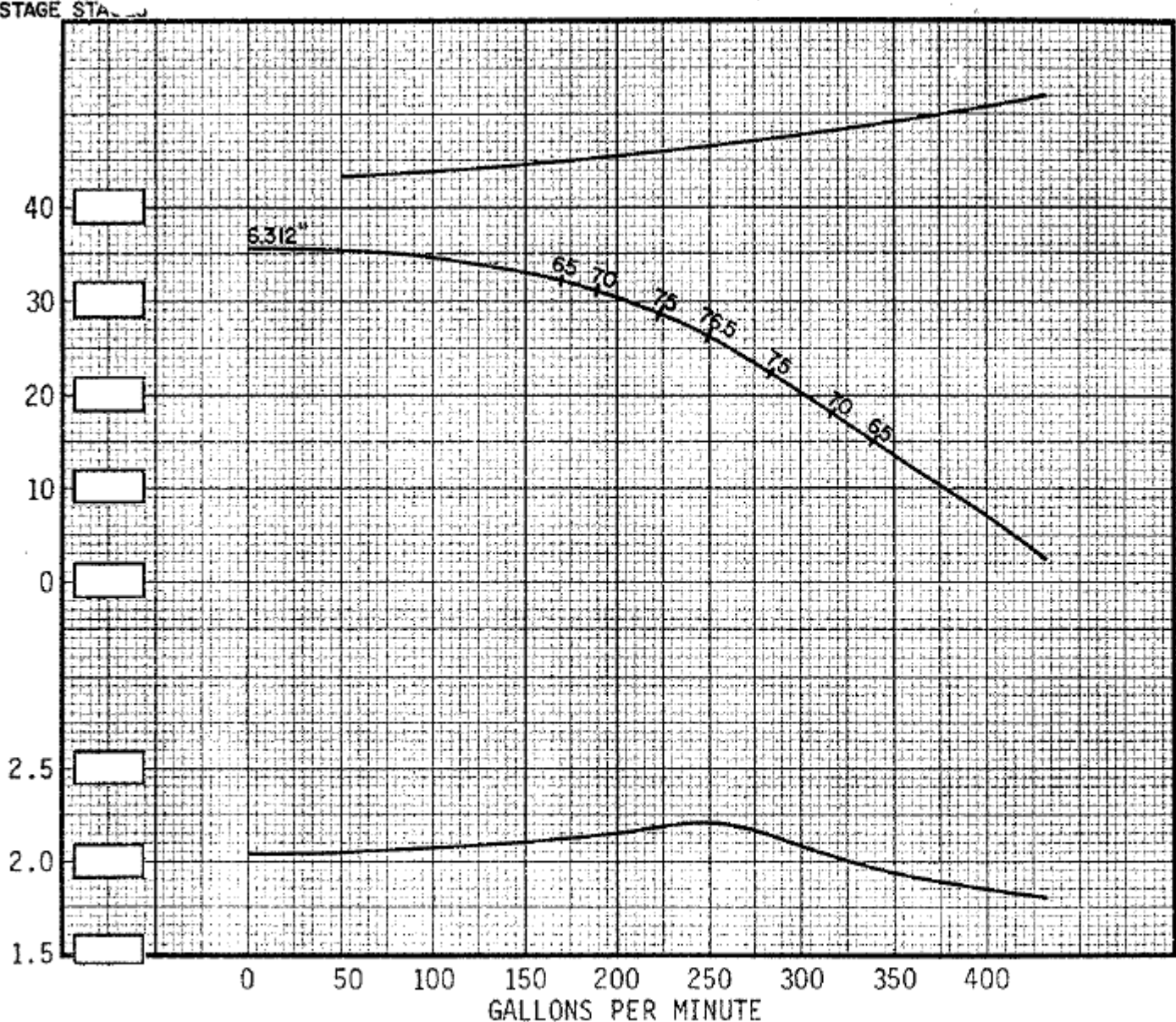
HORSEPOWER

NPSHR



1567 E. HWY. 160  
P.O. BOX 112  
MONTE VISTA  
COLORADO 81144

(719) 852-5174



**I-E**  
**"TOP-O-THE LINE"**

**8DM-250**  
**DESIGN**

**1770**  
**R.P.M.**

SECTION N  
PAGE 204  
DATE 10-11-90

# IMPELLER DATA

TRIM DIAMETER: A 6.312 " B            " C            "            "            "            "

One stage deduct -4 %, 2 stage deduct -3 %, 3 stage deduct -2 %.

EFFICIENCY CORRECTION:            stage add            %,            stage add            %,            stage add            %.

EFFECTIVE IMPELLER EYE AREA 7.22 sq. inches NUMBER OF IMPELLER VANES           

THRUST CONSTANT (K) 6.1 Lbs./Ft.  $WR^2$  (See Note #) .107 Lbs. Ft.<sup>2</sup> MAXIMUM SPHERE SIZE .438 "

IMPELLER EYE FLUID VELOCITY CONSTANT ( $K_e$ )            IMPELLER PERIPHERAL SPEED CONSTANT ( $N_1$ )            (Ft./Sec.)            (Ft./Min.)

## BOWL ASSEMBLY DATA

NOMINAL DIAMETER = 7.6875 ", MINIMUM DIAMETER 7.4375 ", BELL DIAMETER 11.375 ", MIN. BELL DIAMETER 10.375 "

MAXIMUM NO. STAGES (Std. Constr.) 15 MAXIMUM HEAD (Std. Constr.) 912 Ft.

DIAMETER IMPELLER SHAFT 1.250 " MINIMUM IMPELLER SHAFT THREADS 1 "

LATERAL (See explanation below)\* NOMINAL            " MINIMUM            " STANDARD .875 " MAXIMUM            "

WEAR RING CLEARANCE (Nominal) .012 " SHAFT/BEARING CLEARANCE (Nominal) .007 "

FORMULAS: HYDRAULIC THRUST = K Factor x Laboratory Head in feet = 395 Lbs.

IMPELLER PERIPHERAL SPEED ( $U_2$ ) =  $N_1$  Constant x Impeller Diameter            Ft./Sec. or            Ft./Min.

IMPELLER EYE FLUID VELOCITY ( $V_e$ ) =  $K_e$  Constant x GPM =            Ft./Sec.

NOTE # = per impeller.  $WR^2$  includes impeller, impeller collet, and a stage length of impeller shaft

NOTE \* = see lateral definition on Page 8.1, Section 2.1, dated 2/15/63.

NOTE - NOMINAL PROJECTIONS ARE: SHAFT = 14 " Tube = 6 "

(referenced pipe butt or flange face)

- A - Length one-stage assembly / threaded suction
- B - Length one-stage assembly / bell suction
- C - Additional stage length
- D - Bowl diameter
- E - Bell diameter
- F - Projection of bearing hub / bell suction
- G - O.D. bell suction basket strainer
- J - Basket length below bell suction lip
- K - Minimum required submergence, above bottom of bearing hub
- L - Bottom of bearing hub to impeller eye
- M - Pipe butt to top bowl flange
- N - Column pipe flange to bowl flange
- P - Suction case (or coupling) thread engagement
- R - Suction case flange diameter
- S - Flange to flange / bowl to column

## APPLICABLE DIMENSIONS

| DIMENSION | A      | B      | C     | D      | E      | F | G | J | K | L | M | N | P | R | S |
|-----------|--------|--------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|
| INCHES    | 17.875 | 20.625 | 5.625 | 7.6875 | 11.375 |   |   |   |   |   |   |   |   |   |   |

