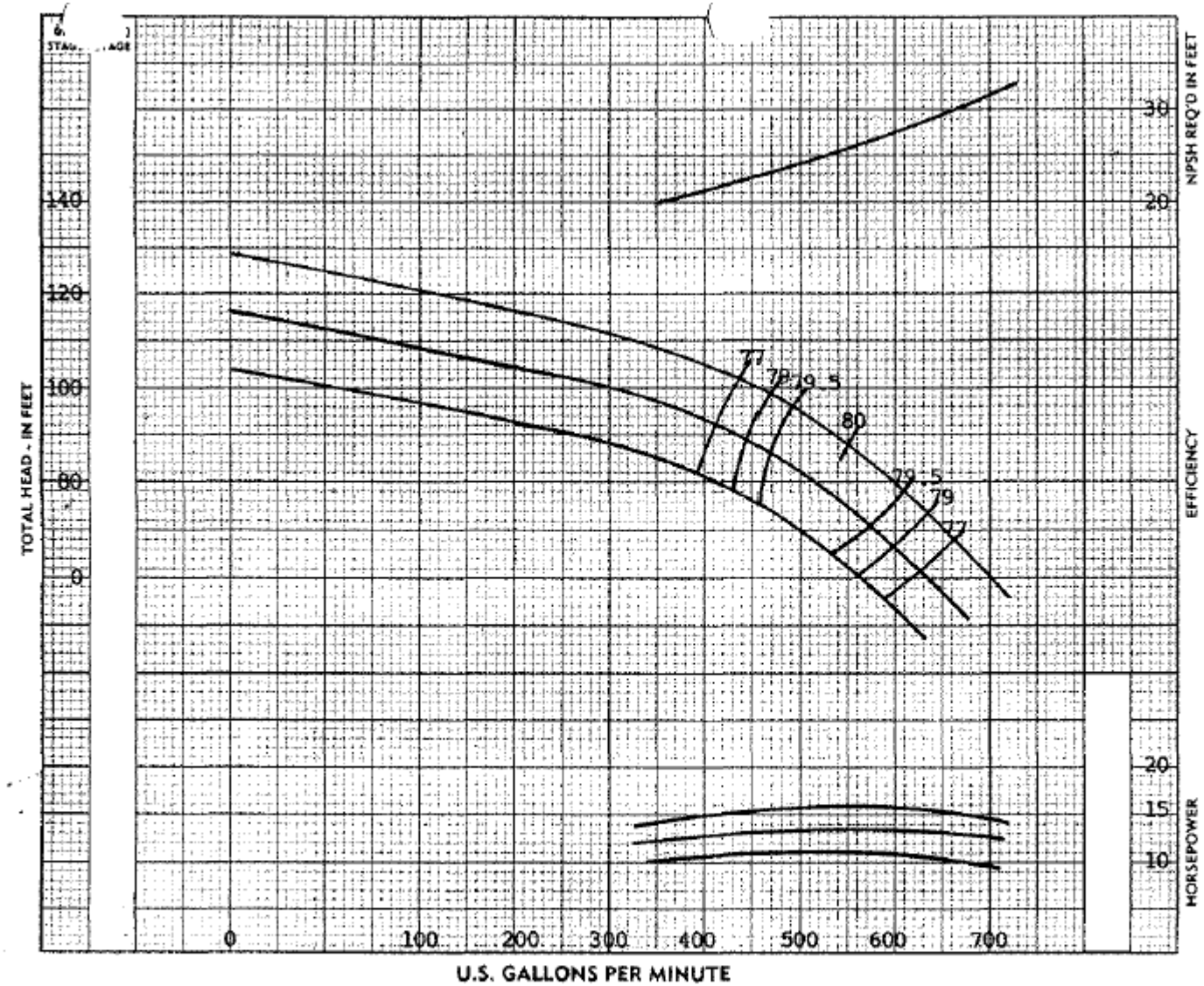
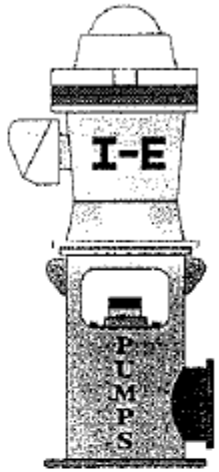



1567 E. HWY. 160
P.O. BOX 112
MONTE VISTA
COLORADO 81144

(719) 852-5174

I-E
"TOP-O-THE LINE"

8AL-550
DESIGN

3450
R.P.M.

SECTION O
PAGE 46
DATE 4-8-91

TRIM DIAMETER: A 5.969 ", B 5.750 " C 5.469 ", _____ ", _____ ", _____ ".

One stage deduct 2 %, 2 stage deduct 1 %, 5 stage deduct 0 %.

EFFICIENCY CORRECTION: 5 stage add 0 %, _____ stage add _____ %, _____ stage add _____ %.

EFFECTIVE IMPELLER EYE AREA 10.4 sq. inches NUMBER OF IMPELLER VANES FIVE

THRUST CONSTANT (K) 7.6 Lbs./Ft. $WR^2$ (See Note @) 0.160 Lbs. Ft.$^2$ MAXIMUM SPHERE SIZE 9/16 ".

IMPELLER EYE FLUID VELOCITY CONSTANT ($K_e$) .030 IMPELLER PERIPHERAL SPEED CONSTANT ($N_i$) 1.52 (Ft./Sec.) 91.20 (Ft/Min.)

## BOWL ASSEMBLY DATA

NOMINAL DIAMETER = 7 1/2 ", MINIMUM DIAMETER = 7 7/16 ", BELL DIAMETER 6 3/4 ", MIN. BELL DIAMETER 6 3/4 ".

MAXIMUM NO. STAGES (Std. Constr.) 3.5 MAXIMUM HEAD (Std. Constr.) 810 Ft.

DIAMETER IMPELLER SHAFT 1 3/16 ". MINIMUM IMPELLER SHAFT THREADS 3/4 ".

LATERAL (See explanation below)* NOMINAL .437 ", MINIMUM .310 ", STANDARD .375 ", MAXIMUM .687 ".

WEAR RING CLEARANCE (Nominal) 0.013 ", SHAFT / BEARING CLEARANCE (Nominal) 0.008 ".

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

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

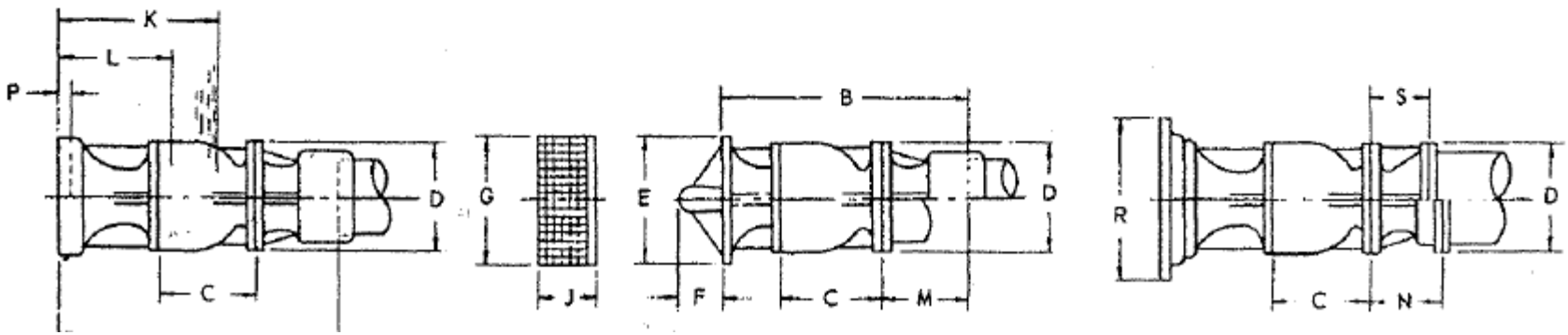
IMPELLER EYE FLUID VELOCITY ($V_e$) = $K_e$ Constant x GPM = _____ Ft./Sec.

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 ",
(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 | 20 1/2 | 17 | 6 1/2 | 7 1/2 | 9 3/4 | 3 3/8 | 10 3/4 | 6 | 15 | 7 | 7 | 5 5/8 | 1 3/8 | 10 | 5 |