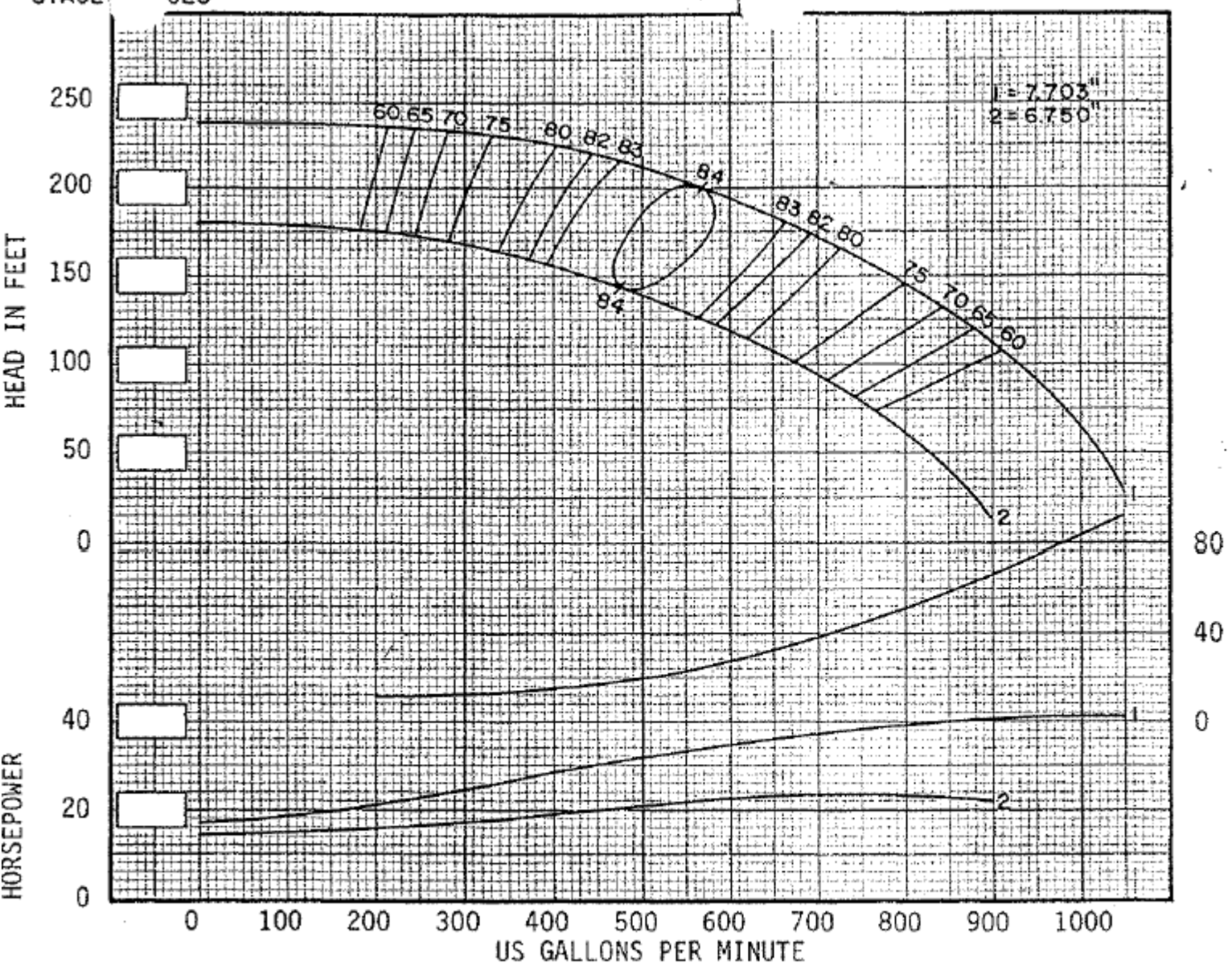
ONE STAGE GES



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

(719) 852-5174

I-E

"TOP-O-THE LINE"

10SL-570
DESIGN

3450
R.P.M.

SECTION O
PAGE 815
DATE 4-18-91

IMPELLER DATA

TRIM DIAMETER: A 7.703 ", B 6.750 ", C 5.0 ", — ", — ", — "

One stage deduct 3 %, two stage deduct 2 %, three stage deduct 1 %

EFFICIENCY CORRECTION: 4 stage add 0 %, -- stage add -- %, — stage add — %

EFFECTIVE IMPELLER EYE AREA 9.74 sq. inches NUMBER OF IMPELLER VANES --

THRUST CONSTANT (K) 4.5 Lbs./Ft. WR_2 (See Note 6) .303 Lbs./Ft.2 MAXIMUM SPHERE SIZE .531

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

BOWL ASSEMBLY DATA

NOMINAL DIAMETER = 9.5 ", MINIMUM DIAMETER = -- ", BELL DIAMETER 11.375 ", MIN. BELL DIAMETER -- "

MAXIMUM NO. STAGES (Std. Constr.) 3 MAXIMUM HEAD (Std. Constr.) 592 Ft

DIAMETER IMPELLER SHAFT 1.5 ", MINIMUM IMPELLER SHAFT THREADS -- "

LATERAL (See explanation below)* NOMINAL -- ", MINIMUM - ", STANDARD -- ", MAXIMUM -- "

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

FORMULAS: HYDRAULIC THRUST=K Factor x Laboratory Head in feet= -- 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

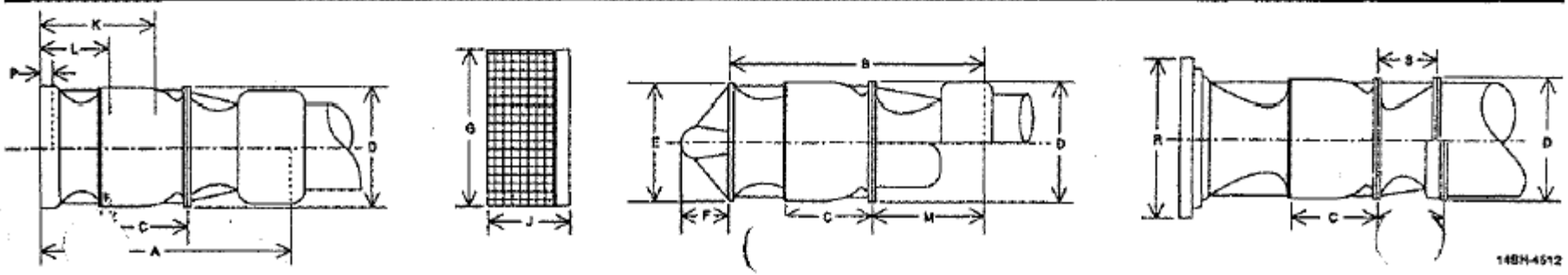
NOTE: * = see lateral definition on Page 8.1, Section 2.1 dated 2/15/63.

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	23	–	7.75	9.5	-	3.5	-	-	15	-	-	-	-	-	-



IMPELLER DATA

TRIM DIAMETER: A 7.703 ", B 6.750 ", C -- ", — ", — ", —"

One stage deduct 3 %, two stage deduct 2 %, three stage deduct 1 %

EFFICIENCY CORRECTION: 4 stage add 0 %, -- stage add -- %, — stage add — %

EFFECTIVE IMPELLER EYE AREA 10.41 sq. inches NUMBER OF IMPELLER VANES --

THRUST CONSTANT (K) 4.5 Lbs./Ft. WR_2 (See Note 6) .286 Lbs./Ft.2 MAXIMUM SPHERE SIZE .531

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

BOWL ASSEMBLY DATA

NOMINAL DIAMETER = 9.5 ", MINIMUM DIAMETER = -- ", BELL DIAMETER 11.375 ", MIN. BELL DIAMETER -- "

MAXIMUM NO. STAGES (Std. Constr.) 3 MAXIMUM HEAD (Std. Constr.) 642 Ft

DIAMETER IMPELLER SHAFT 1.5 ", MINIMUM IMPELLER SHAFT THREADS -- "

LATERAL (See explanation below)* NOMINAL -- ", MINIMUM - ", STANDARD -- ", MAXIMUM -- "

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

FORMULAS: HYDRAULIC THRUST=K Factor x Laboratory Head in feet= -- 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
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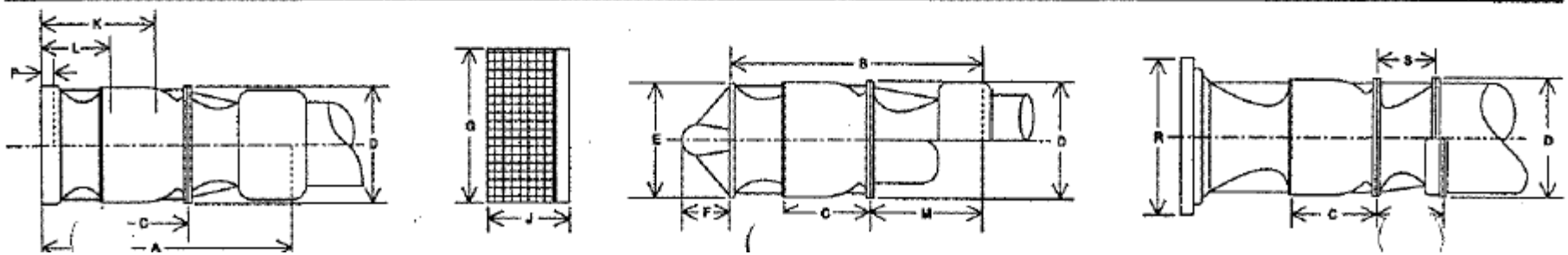
M - Pipe butt to top bowl flange
N - Column pipe flange to bowl flange
P - Suction case (or coupling) thread engagement
R - Suction case flange diameter
S - Flange to flange/bowl to column

APPLICABLE DIMENSIONS

DIMENSION	A	B	C	D	E	F	G	J	K	L	M	N	P	R	S
INCHES	23	--	7.75	9.5	-	3.5	-	-	15	-	-	-	-	-	-