

ONE ()
STAGE AGES

HEAD IN FEET

HORSEPOWER

250
200
150
100
50
0
100
50
0

0 250 500 750 1000 1250 1500 1750 2000
US GALLONS PER MINUTE

1 = 8.175"
2 = 7.250"

60 65 70 75 78 80 81 81.5 81 80 78 75 70 65 60
82

2

1



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

I-E

"TOP-O-THE LINE"

11TM-1290

DESIGN

3450

R.P.M.

SECTION 0
PAGE 821
DATE 4-18-91

IMPELLER DATA

TRIM DIAMETER: A 8.175 ", B 7.250 ", C -- ", -- ", -- ", -- "

One stage deduct 4 %, two stage deduct 3 %, three stage deduct 2 %

EFFICIENCY CORRECTION: 5 stage add 0 %, -- stage add -- %, -- stage add -- %

EFFECTIVE IMPELLER EYE AREA 13.42 sq. inches NUMBER OF IMPELLER VANES --

THRUST CONSTANT (K) 6.7 Lbs./Ft. WR₂ (See Note 6) .347 Lbs./Ft.² MAXIMUM SPHERE SIZE .875

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

BOWL ASSEMBLY DATA

NOMINAL DIAMETER = 10.1875 ", MINIMUM DIAMETER = -- ", BELL DIAMETER 11.375 ", MIN. BELL DIAMETER -- "

MAXIMUM NO. STAGES (Std. Constr.) 6 MAXIMUM HEAD (Std. Constr.) 1086 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_i)=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. WR₂ 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	25.75	-	8.5	10.1875	-	3.5	-	-	16	-	-	-	-	-	-

