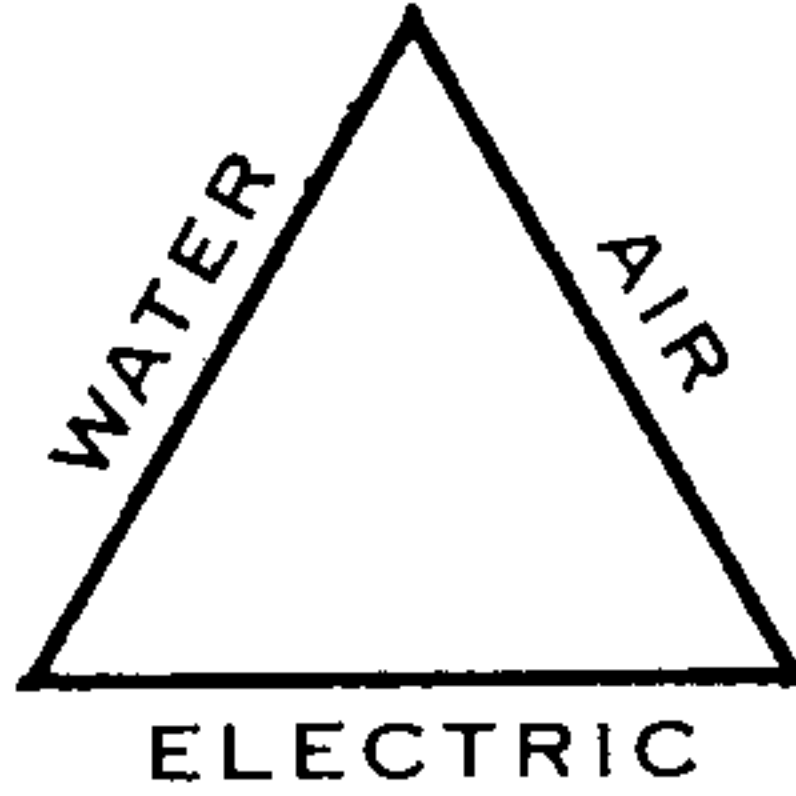


# Mechanical Balancing Co.

222 WEST OSBORN ROAD  
PHOENIX, ARIZONA 85013



PHONE: 274-6660

April 28, 1967

AERO / DYNE Company  
Box 11179 Station A  
Palo Alto, California 94306

Attention: Mr. Gordon Jacobsen

Dear Mr. Jacobsen:

On April 21 static pressure and velocity profile tests were conducted on the following listed products.

- A. AERO/ DYNE Co. H. E. P. Airfoil turning vanes
- B. Long radius shop-fabricated elbow, radius of turn 1 1/2 times duct width
- C. Sheet metal shop fabricated double thickness turning vanes
- D. Major manufacturer single thickness turning vanes
- E. Major manufacturer double thickness turning vanes
- F. Square elbow without turning vanes

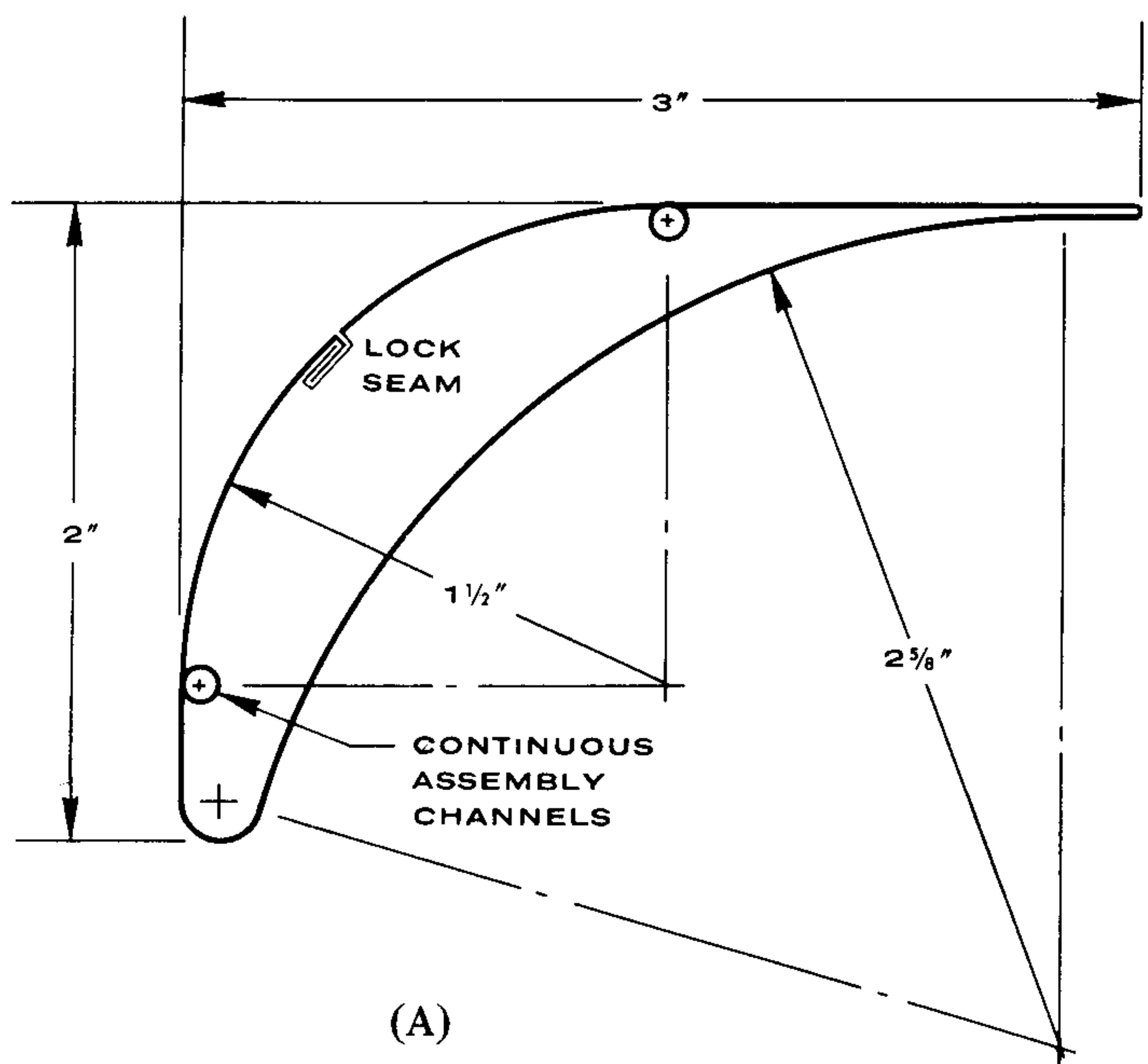
All tests were performed under identical conditions as shown on page two of the accompanying report and the certified test results are listed on page three herein.

We find your turning vanes to have less resistance than the other five so tested.

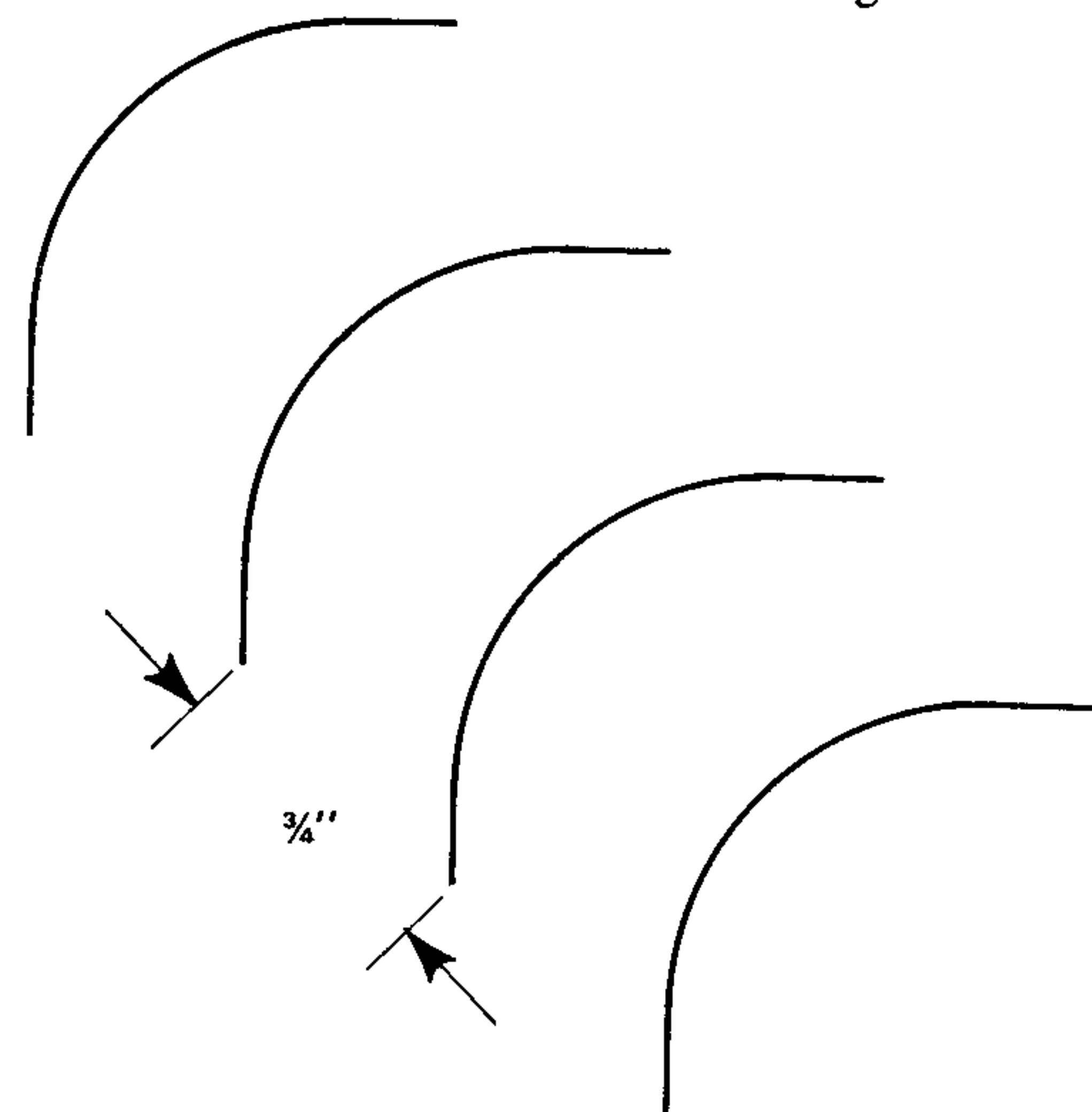
Very truly yours,

  
E. E. Strickland

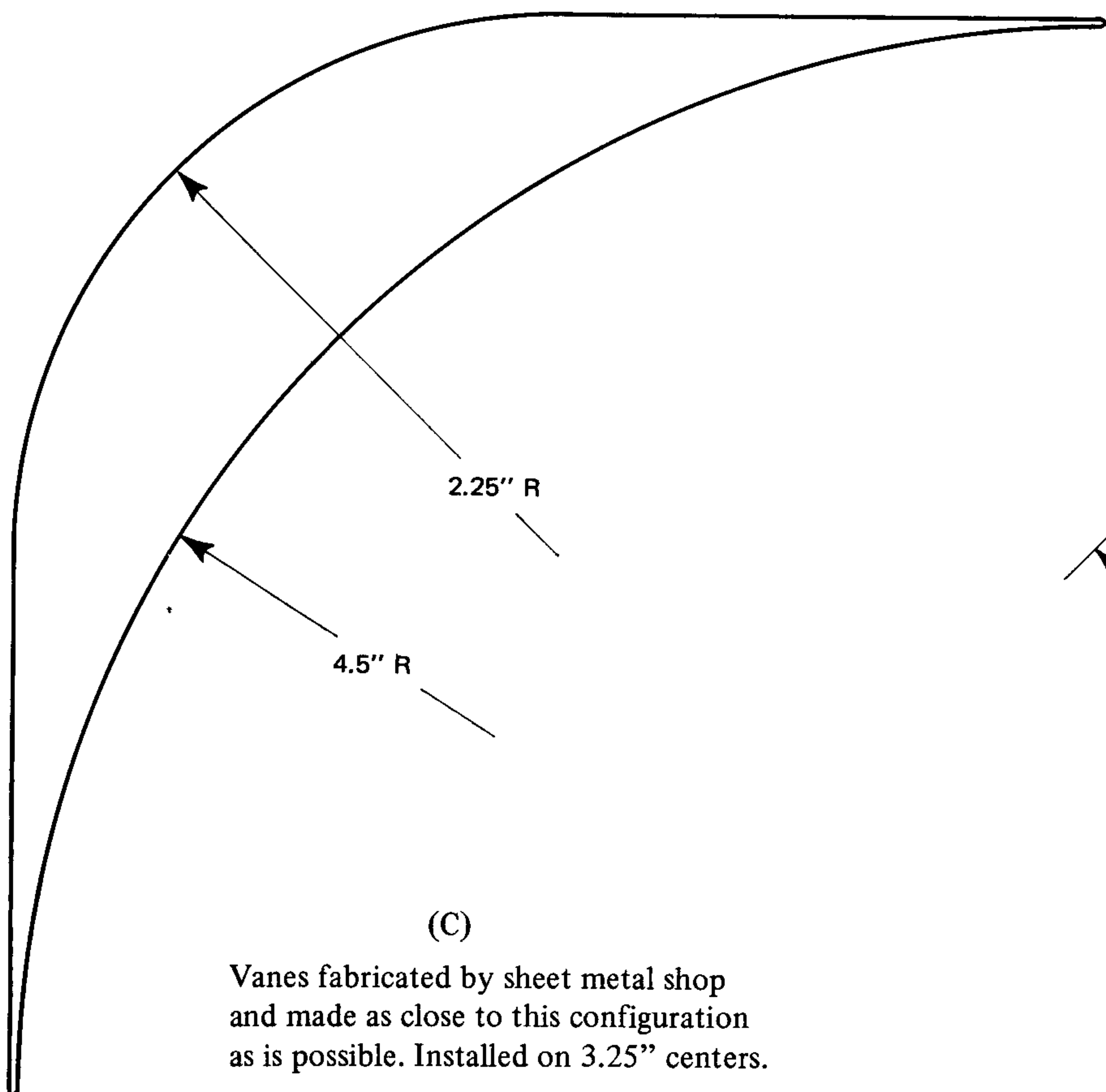
EES:ms



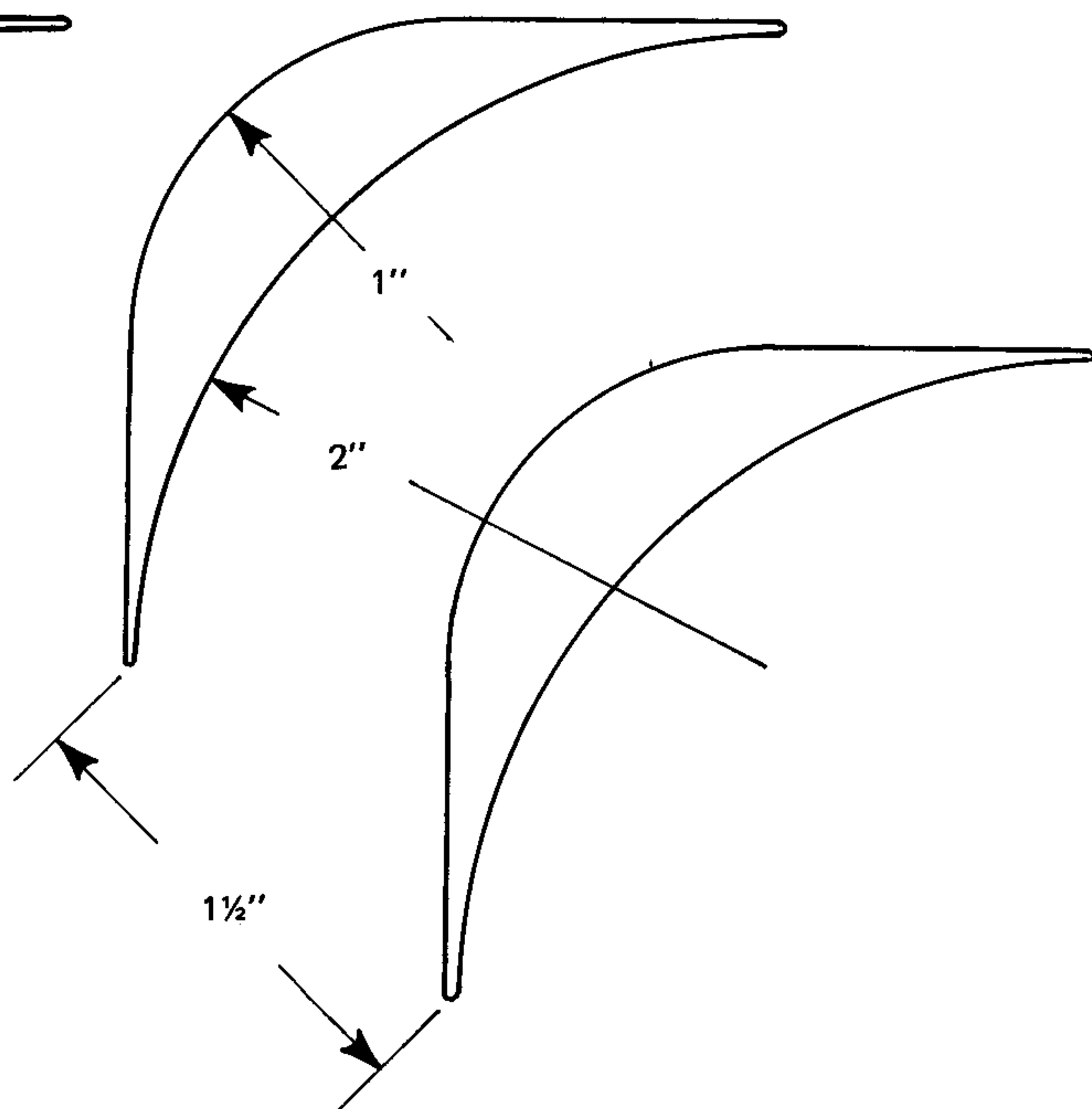
(A)  
H.E.P. – High Efficiency Profile  
Installed on design centers.



(D)  
Vanes by a major manufacturer which are assembled in "slab" form with spacing bars at intervals along the length of the vanes. Installed in accordance with the manufacturer's instructions.

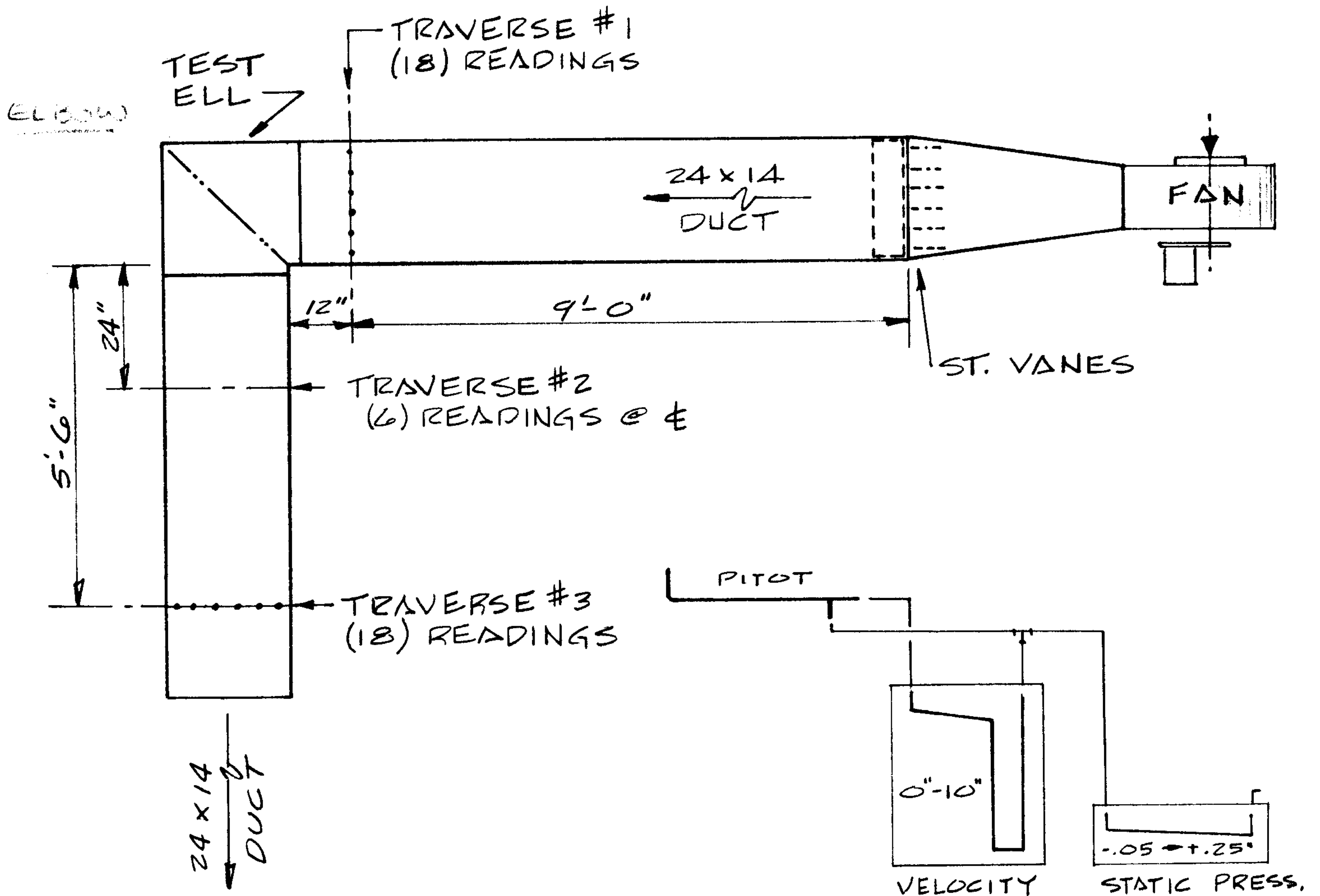


(C)  
Vanes fabricated by sheet metal shop and made as close to this configuration as is possible. Installed on 3.25" centers.



(E)  
Vanes produced by a small, commercially available roll-forming machine. Dimensions and configuration are the same as those of vanes produced by a major manufacturer. Installed in accordance with the manufacturer's instructions.

DUCT ELBOW & TURNING VANE  
TEST LAYOUT



INSTRUMENTS

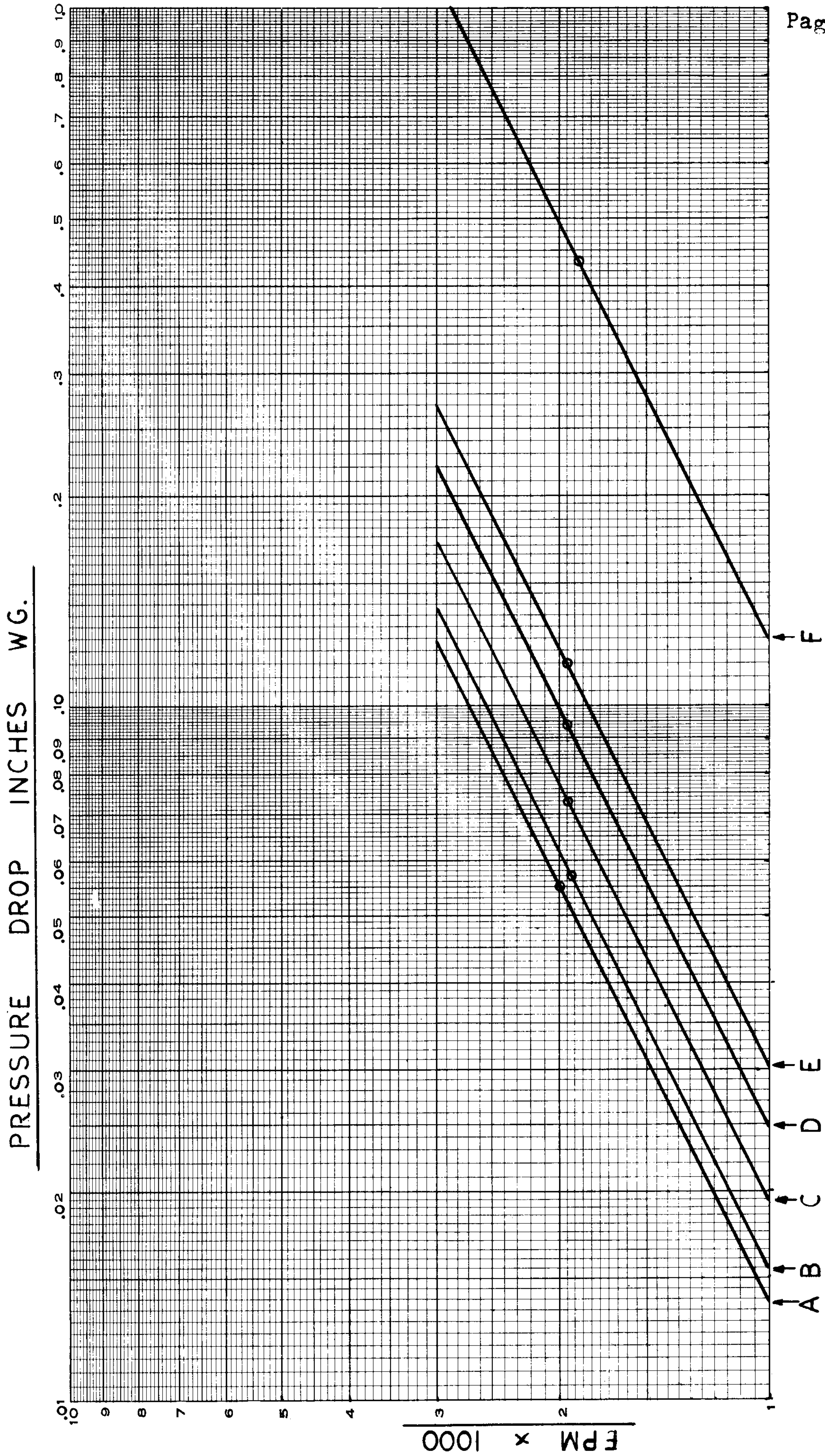
"Dwyer" -.05" to +.25" inclined manometer .005" div.  
"Dwyer" 0" to 10" inclined manometer mod. #400

FAN

FEERLESS MASTER MOD. 150 H UTIL. SVSIBCS  
RPM. 2225 HP. 2

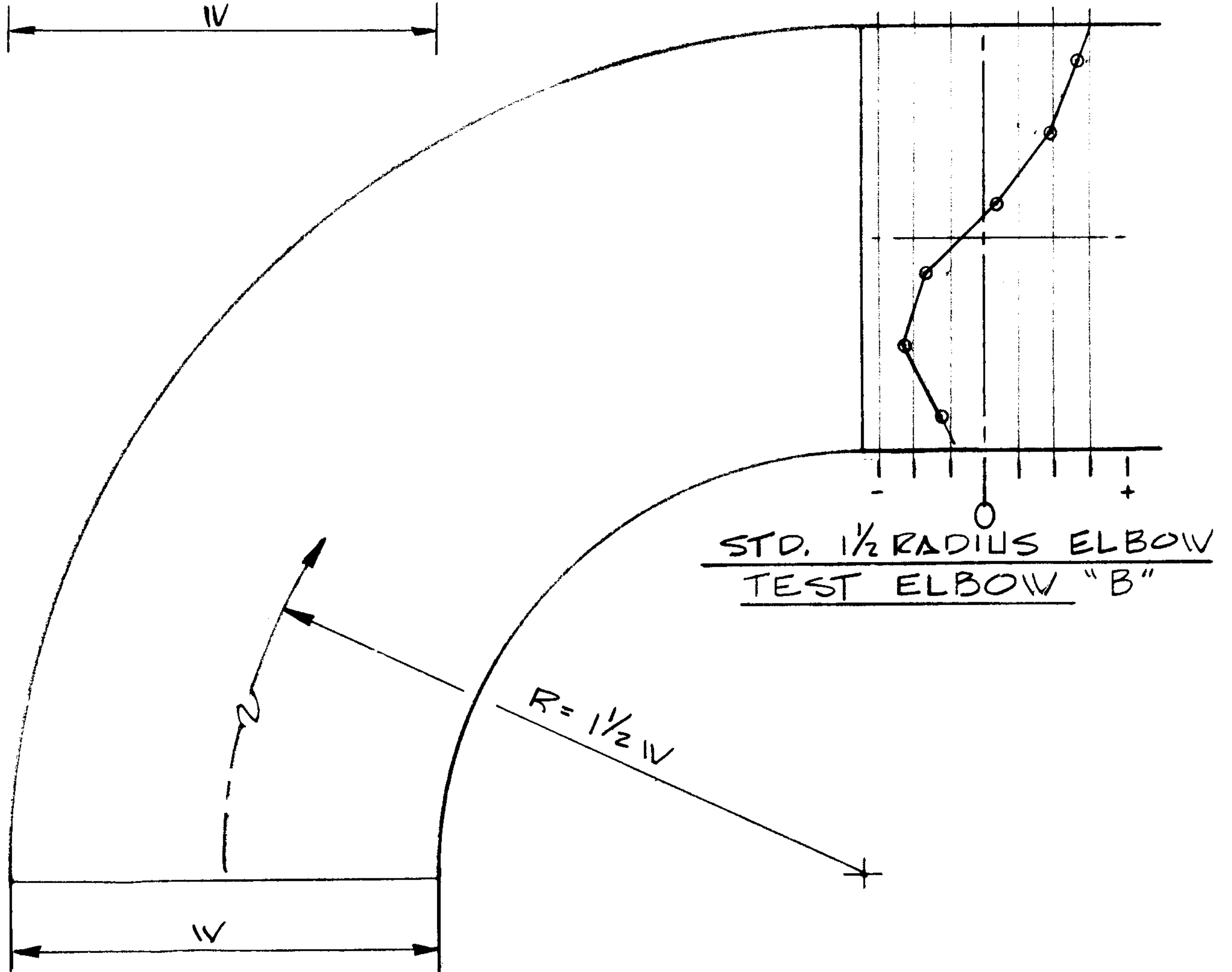
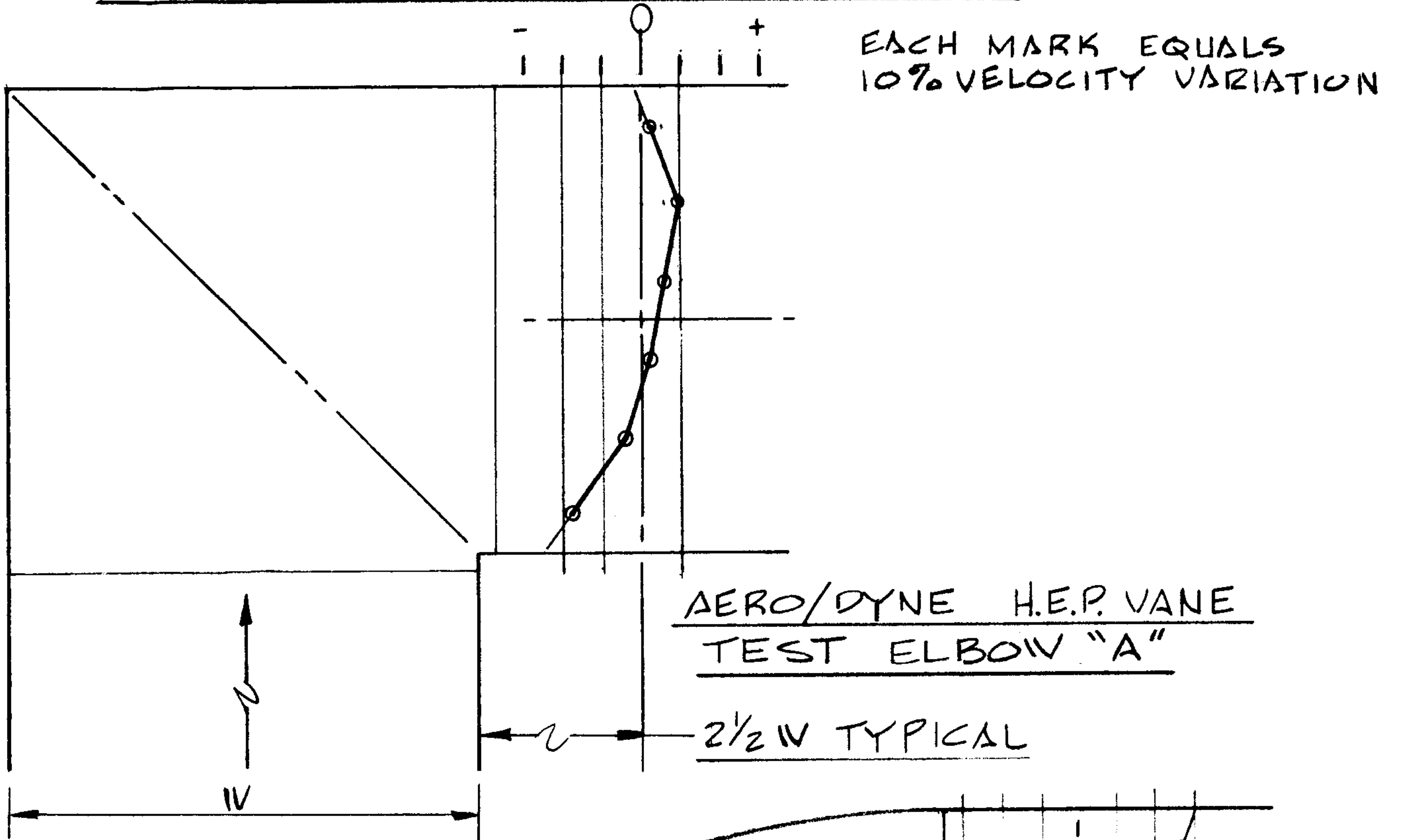
NOTE: ALL TEST DATA TAKEN AT APPROX. 1950 FPM.  
VELOCITY PROFILE DIAGRAMS SHOW PERCENT  
VARIATION OF DISCHARGE VELOCITY VS. INLET  
VELOCITY. EACH MARK EQUALS 10%.

ELBOW	TRAVERSE #1	S.P.	TRAVERSE #2	S.P.	TRAVERSE #3	S.P.	DIFF. PRESS. #1 vs #3
A	1992	.081	1955	.0356	1978	.0257	.055
A	1450	.041	1550	.021	1527	.0157	.024
B	1938	.074	1928	.0163	1915	.017	.057
B	1391	.0447	1501	.0105	1393	.0123	.032
C	1974	.098	1930	.0385	1962	.025	.073
C	1417	.052	1478	.0217	1428	.015	.037
D	1957	.117	2075	.024	1938	.0227	.094
D	No test @ low velocity						
E	1951	.139	1973	.033	1934	.0235	.115
E	No test @ low velocity						
F	1872	.353	2125	-.318	1887	-.081	.434
F	1300	.204	1335	-.18	1270	-.057	.261

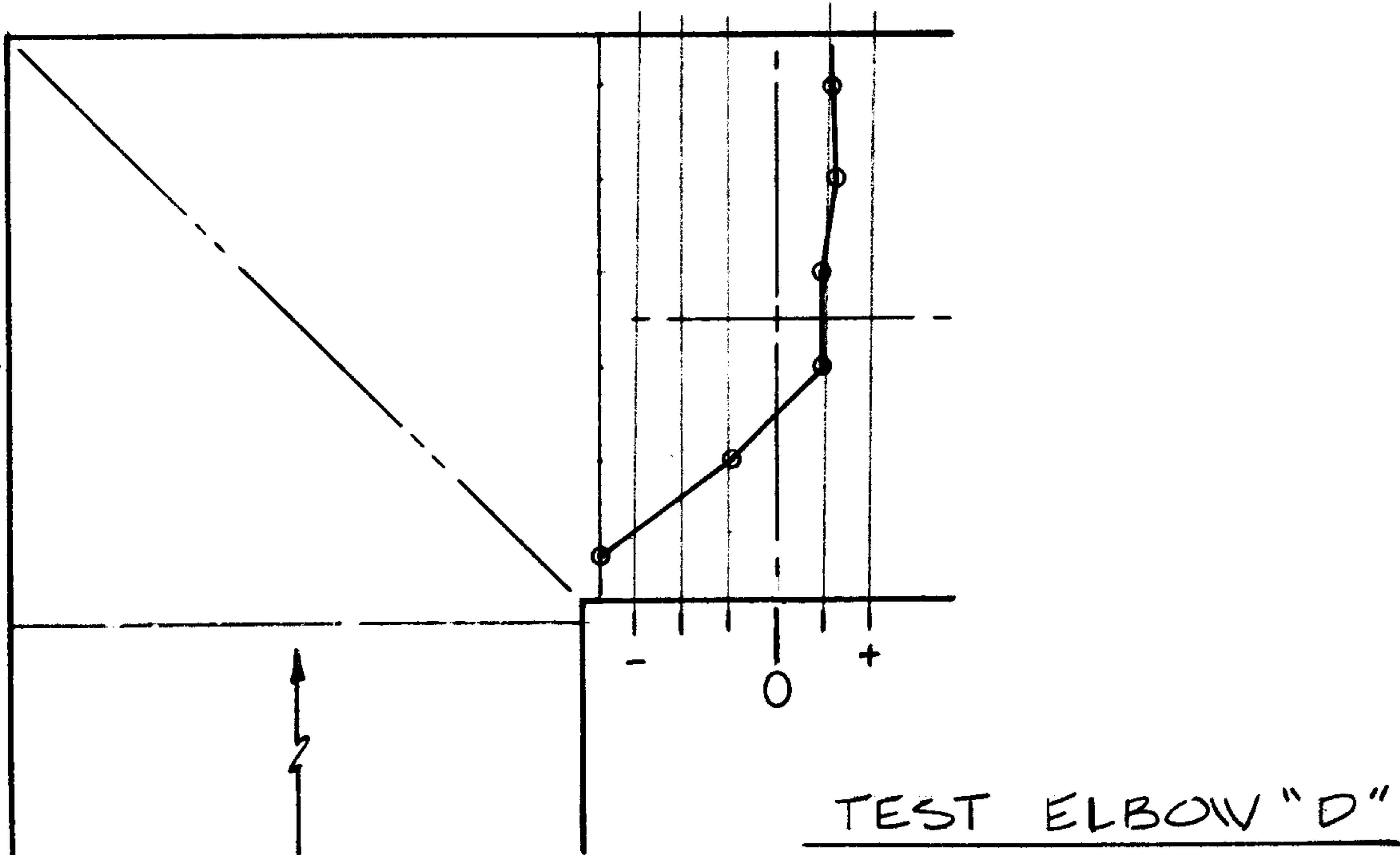
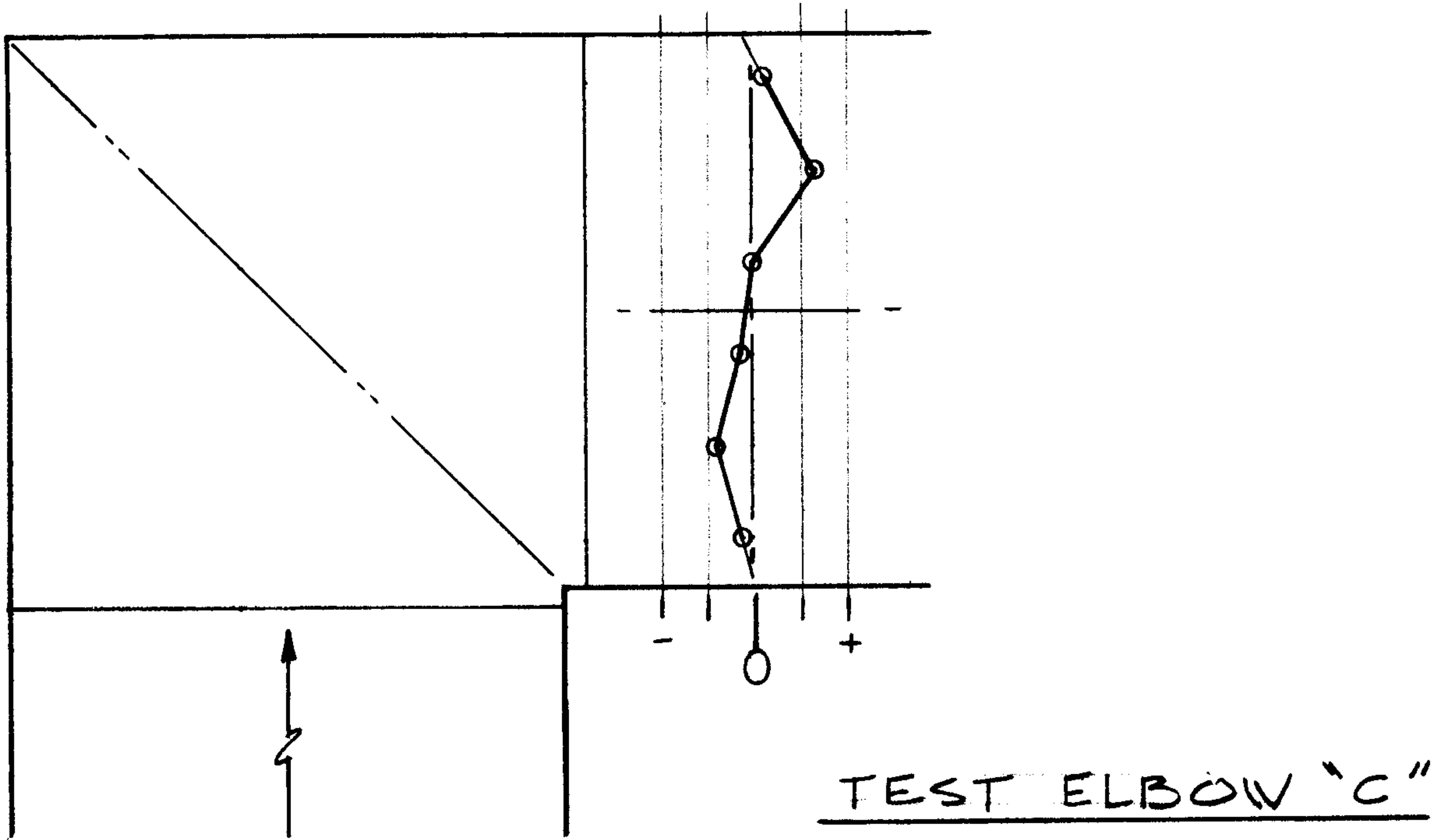


 INDICATES TEST POINT

OUTLET VELOCITY PROFILES



OUTLET VELOCITY PROFILES



OUTLET VELOCITY PROFILES

