

Figure 32 (near). Drag coefficients of various 3-dimensional bodies (40) at R'numbers between 10^4 and 10^6 . Note: (●) tested on wind-tunnel floor.

- ¶(37) Information on rear-side pressure of plates:
- On disks and small-aspect-ratio plates see: NACA (36, a); AVA Ergebnisse IV; reference (40,f).
 - On plates between walls see: (12), (35,a) and (40,f).
- ¶(40) Experimental results on three-dimensional bodies:
- Doetsch, Parachute Models, Lufo 1938 P.577.
 - NACA, Cup Anemometer, Tech Rpt 513 (1935).
 - AVA, Hemispherical Bodies, Ergebnisse IV (1932).
 - Eiffel, Recherches a Tour Eiffel, Paris 1907.
 - Hemispherical Cup at $R_d = 2 \cdot 10^5$, ARC RM 712 (1919).
 - Irminger and Nokkentved, Elementary Bodies and Buildings, Copenhagen 1930 and 1936; Transl'n by Jarvis.
 - (41) Sections (tested between plates or walls):
 - Lindsey, Simple Shapes, NACA T. Rpt 619 (1940).
 - Junkers Wind-Tunnel, Report Ströte V.9609 (1940).
 - Interference Between Struts, NACA T. Rpt 468 (1933).
 - Delany-Sorensen, Various Shapes, NACA T. Note 3038.
 - AVA Göttingen, Ergebnisse II (1923) and III (1926).
 - Junkers Wind-Tunnel Result on Angle Profile.
 - Reported by Barth, Zt. Flugwissen 1954 p.309.
 - (42) Free-streamline (cavitation) theory:
 - Kirchhoff, Free Jet Theory, Crelle 1869 (see Lamb).
 - Bobyleff, Russian Phys.-Chem. Society 1881 (see Lamb).
 - Riabouchinsky-Plessset-Schafer, Journal Appl. Physics 1948 p.934, and Review Modern Physics 1948 p.228.
 - Reichardt, Laws of Cavities, German ZWB UM 6628.
 - (43) Neef, Dive Brakes, Fieseler Tunnel Rpt 22 (1941).

Figure 33 (right). Drag coefficients (41) of 2-dimensional shapes (between walls) at R between 10^4 and 10^6 . Note: (+) in subcritical flow.

The diagram illustrates flow separation and the formation of a vortex street for different 2D shapes. A horizontal arrow labeled 'V' indicates the direction of flow from left to right. Behind each shape, a curved arrow shows the flow separation point where the boundary layer detaches. After separation, a dashed arrow indicates the wake region. The shapes are arranged in two rows:

- Top Row:**
 - (d) A triangle with a separation point at -60° from the leading edge, labeled 0.50.
 - (e) A diamond shape with a separation point at -60° from the leading edge, labeled 0.59.
 - (c) A semi-circle with a separation point at -60° from the leading edge, labeled 0.42.
 - (g) A semi-circle with a separation point at -60° from the leading edge, labeled 1.16.
 - (a) A semi-circle with a separation point at -60° from the leading edge, labeled 1.20.
 - (b) A square with a separation point at -60° from the leading edge, labeled 1.38.
 - (f) A cube with a separation point at -60° from the leading edge, labeled 1.42.
- Bottom Row:**
 - (a) A semi-circle with a separation point at -60° from the leading edge, labeled 1.55.
 - (e) A diamond shape with a separation point at -60° from the leading edge, labeled 1.55.
 - (d) A semi-circle with a separation point at -60° from the leading edge, labeled 1.60.
 - (g) A semi-circle with a separation point at -60° from the leading edge, labeled 1.74.
 - (a) A semi-circle with a separation point at -60° from the leading edge, labeled 1.98.
 - (b) A square with a separation point at -60° from the leading edge, labeled 2.20.
 - (f) A cube with a separation point at -60° from the leading edge, labeled 2.30.
 - (a) A square with a separation point at -60° from the leading edge, labeled 2.05.