


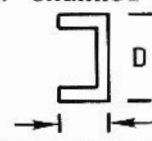
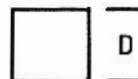
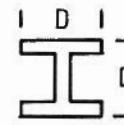
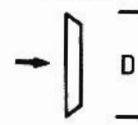
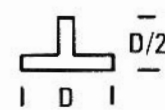

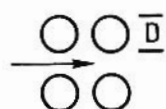
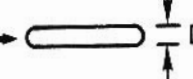


**Table 10-16. Strouhal Numbers for Various Sections.**

Notation:  $D$  = characteristic width;  $Re = UD/\nu$ , Reynolds number;  $S = fD/U$ , Strouhal number where  $f$  is vortex shedding frequency in hertz and  $U$  is free stream velocity. Refs. 10-142 and 10-148. Also see Fig. 10-24. Reynolds number is  $10^4$  to  $10^5$  unless otherwise noted.  $\rightarrow$  denotes direction of free stream. Uncertainty is  $\pm 10\%$ .

Section	Strouhal Number, S					Section	Strouhal Number, S	
1. Circle 	Re	<30	50	500	10 <sup>3</sup>	7. Right Angle 	→0.13 →0.24 ↗0.13	
	S	0	0.13	0.20	0.21			
	Re	10 <sup>4</sup>	10 <sup>5</sup>	10 <sup>6</sup>	10 <sup>7</sup>			
	S	0.20	0.19	0.21	0.23			
2. D Section 	→0.16 →0.21 ↗0.21					8. Channel 	→0.14 →0.13	
3. Square 	→0.12 ↗0.16					9. I Beam 	→0.14 ↗0.12	
4. Thin Plate 	Re	40	200	10 <sup>3</sup>	10 <sup>4</sup>	10 <sup>5</sup>	10. T Beam 	→0.14 ↗0.14
	S	0.13	0.17	0.15	0.14	0.13		
5. Isosceles Triangle 	→0.15 →0.19					11. Tube Array 	0.2 < S < 0.5 for U equal to velocity in gap between tubes. See Ref. 10-140.	
6. Slab 	→0.20 (trailing edge is bluff)							