

# ANCHOR BRONZE & METALS, INC.

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## PV Data

COPPER ALLOY	MAX PV	MAX P	MAX V
C93200 (SAE 660) Leaded Tin Bronze	75,000	4,000	750
C93700 (SAE 64) Leaded Tin Bronze	85,000	4,000	1,000
C93800 (SAE 67) Leaded Tin Bronze	75,000	2,500	1,000
C90300 (SAE 620) Tin Bronze "Navy G" Alloy D5	90,000	5,000	250
C90700 (SAE 65) Tin Bronze	100,000	5,000	250
C86300 (SAE 430B) Manganese Bronze	150,000	8,000	150
C95400 (9C) Aluminum Bronze	125,000	6,000	250
C95500 Nickel Aluminum Bronze	135,000	7,000	300
SAE 841 Oil Impregnated Sintered Bronze	50,000	2,000	1.200

All values are based on 72° room temperature and the standard lubricant for the bearing in question. All of the V's (and therefore the PV's) can be raised by special lubricating techniques. Not all materials listed above are available from Anchor Bronze & Metals.

+General reference data only. \* Also available graphited (25 - 35% graphited area).

### PV CALCULATION

PV is a means of measuring the performance capabilities of bearings. P is expressed as pressure or pounds per square inch on the projected area of the bearing. V is velocity in feet per minute of the wear surface (surface feet per minute).

For sleeve (plane) bearings, the surface speed is  $.262 (\pi \div 12) \times \text{RPM} \times \text{shaft diameter in inches}$ . P is equal to the load on the bearing in pounds divided by the projected area in square inches. For sleeve (plane) bearings, the projected area is the length x the inside diameter of the bearing. PV is then obtained by multiplying P x V as shown in the following example:

3/4" shaft @ 341 RPM, 90 lb. total load, bearing length 1"

$V = .262 \times \text{RPM} \times \text{shaft diameter}$ , or  $.262 \times 341 \times .750 = 67$  sfpm.

$P = \text{total load} \div \text{projected area}$  (area =  $.750 \times 1.0 = .75$  sq. in.), or  $90 \text{ lbs.} \div .75 = 120$  psi

$PV = 120 \text{ psi} \times 67 \text{ sfpm} = 8040 \text{ PV}$ .