

# Flywheels for Single Bearing Engine Mounted Power Generators—SAE J162a

SAE Recommended Practice  
Last Revised August 1976

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**FLYWHEELS FOR SINGLE BEARING ENGINE MOUNTED POWER GENERATORS—SAE J162a**

**SAE Recommended Practice**

Report of Construction and Industrial Machinery Technical Committee approved March 1970 and last revised August 1976.

**Scope**—This recommended practice incorporates recommended dimensions for flywheels for use with single bearing power generators in the range of 10-500kW, operating at speeds of 1000-1800 rpm.

Driving torque, fastener strength, and rotative speeds shall be consistent with good design practice.

**TABLE I - DIMENSIONS OF FLYWHEELS, mm (INCH)**

| Generator Flywheel No. | A             | B <sup>a</sup>  | C               | D            | G <sup>b</sup> | H           |
|------------------------|---------------|-----------------|-----------------|--------------|----------------|-------------|
| 521 <sup>d</sup>       | 584.2 (23.00) | 673.10 (26.500) | 641.35 (25.250) | -            | 0.0 (0.00)     | 31.8 (1.25) |
| 518 <sup>e</sup>       | 498.3 (19.62) | 571.50 (22.500) | 542.92 (21.375) | -            | 15.7 (0.62)    | 31.8 (1.25) |
| 514 <sup>f</sup>       | 409.4 (16.12) | 466.72 (18.375) | 438.15 (17.250) | 222.2 (8.75) | 25.4 (1.00)    | 28.4 (1.12) |
| 511 <sup>g</sup>       | 314.5 (12.38) | 352.42 (13.875) | 333.38 (13.125) | 203.2 (8.00) | 39.6 (1.56)    | 28.4 (1.12) |
| 500                    | 276.4 (10.88) | 314.32 (12.375) | 295.28 (11.625) | 196.8 (7.75) | 25.4 (1.00)    | 28.4 (1.12) |

  

| Generator Flywheel No. | J           | Tapped Holes <sup>c</sup> |        | Normally Used With SAE Housing Size |
|------------------------|-------------|---------------------------|--------|-------------------------------------|
|                        |             | No.                       | Size   |                                     |
| 521 <sup>d</sup>       | 31.8 (1.25) | 12                        | 5/8-11 | 00                                  |
| 518 <sup>c</sup>       | 31.8 (1.25) | 6                         | 5/8-11 | 00,0                                |
| 514 <sup>f</sup>       | 22.4 (0.88) | 8                         | 1/2-13 | 0, 1/2, 1                           |
| 511 <sup>g</sup>       | 22.4 (0.88) | 8                         | 3/8-16 | 2,3                                 |
| 500                    | 12.7 (0.50) | 8                         | 3/8-16 | 4                                   |

**Note:** Suggested tolerances shall be measured on the assembled engine. See SAE J1033

<sup>a</sup>Diameter tolerance of flywheel coupling pilot bore is +0.13 (0.005), -0.000; maximum eccentricity is 0.13 (0.005) total indicator reading; face runout is 0.013 (0.0005) maximum total indicator reading times the diameter. Diameter tolerance for mating coupling pilot diameter is +0.000, -0.13 (0.005).

<sup>b</sup>Tolerance for mating coupling face locating dimension is +1.30 (0.050), -1.30 (0.50).

<sup>c</sup>Tapped holes should be threaded in accordance with UNC class 2B tolerances of ANSI B1.1, screw threads, and the minimum length of thread engagement shall be 1.5 times the nominal diameter.

<sup>d</sup>Similar to clutch size 21 in SAE J620

<sup>e</sup>Similar to clutch size 18 in SAE J620

<sup>f</sup>Similar to clutch size 14 in SAE J620

<sup>g</sup>Similar to clutch size 11-1/2 in SAE J620

