

○ A Product of the
Cooperative Engineering Program

SAE J620 OCT88

**Flywheels for
Industrial Engines
Used with Industrial
Power Take-Offs
Equipped with
Driving-Ring Type
Overcenter Clutches
and Engine-Mounted
Marine Gears and
Single Bearing
Engine-Mounted
Power Generators**

SAE Standard
Revised October 1988

**S.A.E.
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Submitted for Recognition as
an American National Standard

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**Ø FLYWHEELS FOR INDUSTRIAL ENGINES USED WITH
INDUSTRIAL POWER TAKE-OFFS EQUIPPED WITH DRIVING-RING TYPE
OVERCENTER CLUTCHES AND ENGINE MOUNTED MARINE GEARS AND
SINGLE BEARING ENGINE MOUNTED POWER GENERATORS**

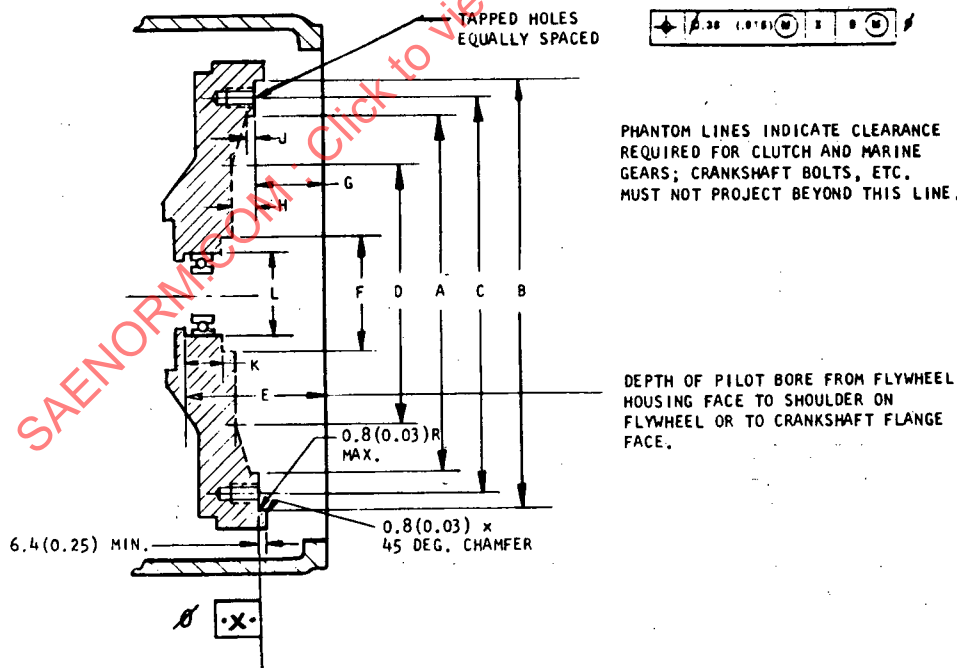
1. SCOPE:

This SAE standard defines flywheel configuration for industry standardization, interchangeability, and compatibility.

Table 1 and the figure give the dimensions for the flywheels.

For dimensions of industrial power take-offs with driving-ring type over-center clutches, see SAE J621.

For flywheel dimensions for engine mounted torque converters without front disconnect clutch, see SAE J927.



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TABLE 1 - Dimensions of Flywheels, mm (in.)

Clutch Size	A	B ^{a,b}	C	D	E ^{e,k}	F
165 (6-1/2)	184.2 (7.25)	215.90 (8.500)	200.02 (7.875)	127.0 (5.00)	71.4 (2.81)	63.5 (2.50)
190 (7-1/2)	206.2 (8.12)	241.30 (9.500)	222.25 (8.750)	-	71.4 (2.81)	63.5 (2.50)
200 (8)	225.6 (8.88)	263.52 (10.375)	244.48 (9.625)	-	100.1 (3.94)	76.2 (3.00)
255 (10) ^f	276.4 (10.88)	314.32 (12.375)	295.28 (11.625)	196.8 (7.75)	100.1 (3.94)	76.2 (3.00)
290 (11-1/2) ^g	314.5 (12.38)	352.42 (13.875)	335.38 (13.225)	203.2 (8.00)	100.1 (3.94)	-
355 (14) ^h	409.4 (16.12)	466.72 (18.375)	438.15 (17.250)	222.2 (8.75)	100.1 (3.94)	101.6 (4.00)
405 (16)	460.2 (18.12)	517.52 (20.375)	488.95 (19.250)	254.0 (10.00)	100.1 (3.94)	104.6 (4.12)
460 (18) ⁱ	498.3 (19.62)	571.50 (22.500)	542.92 (21.375)	-	100.1 (3.94)	104.6 (4.12)
530 (21) ^j	584.2 (23.00)	673.10 (26.500)	641.35 (25.250)	-	100.1 (3.94)	146.0 (5.75)
610 (24)	644.7 (25.38)	733.42 (28.875)	692.15 (27.250)	-	100.1 (3.94)	146.0 (5.75)
Clutch Size	G ^e	H	J	K ^{c,k}	L ^{b,c,k}	Tapped Holes ^d
						No. Size
165 (6-1/2)	30.2 (1.19)	12.7 (0.50)	9.7 (0.38)	17.5 (0.69)	52.000 (2.0472)	6 (5/16-18)
190 (7-1/2)	30.2 (1.19)	12.7 (0.50)	12.7 (0.50)	17.5 (0.69)	52.000 (2.0472)	8 (5/16-18)
200 (8)	62.0 (2.44)	12.7 (0.50)	12.7 (0.50)	19.0 (0.75)	62.000 (2.4409)	6 (3/8-16)
255 (10)	53.8 (2.12)	15.7 (0.62)	12.7 (0.50)	28.4 (1.12)	72.000 (2.8346)	8 (3/8-16)
290 (11-1/2)	39.6 (1.56)	28.4 (1.12)	22.4 (0.88)	31.8 (1.25)	72.000 (2.8346)	8 (3/8-16)
355 (14)	25.4 (1.00)	28.4 (1.12)	22.4 (0.88)	38.1 (1.50)	80.000 (3.1496)	8 (1/2-13)
405 (16)	15.7 (0.62)	28.4 (1.12)	22.4 (0.88)	44.4 (1.75)	100.000 (3.9370)	8 (1/2-13)
460 (18)	15.7 (0.62)	31.8 (1.25)	31.8 (1.25)	44.4 (1.75)	100.000 (3.9370)	6 (5/8-11)
530 (21)	0.0 (0.00)	31.8 (1.25)	31.8 (1.25)	57.2 (2.25)	130.000 (5.1181)	12 (5/8-11)
610 (24)	0.0 (0.00)	31.8 (1.25)	31.8 (1.25)	57.2 (2.25)	130.000 (5.1181)	12 (3/4-10)

NOTE: Suggested tolerances are to be measured on assembled engine; for measuring procedure, see SAE J1033.

^aDiameter tolerance of driving-ring pilot bore 'B' is plus 0.13 (0.005), minus 0.000; maximum eccentricity is 0.13 (0.005) total indicator reading (see footnote b); face runout maximum total indicator reading is 0.0005 times the measured diameter. Diameter tolerance for mating driving ring, etc. pilot diameter is plus 0.000, minus 0.13 (0.005).

^bEccentricity between driving-ring pilot bore 'B' and pilot bearing bore 'L' is not to exceed 0.20 (0.008) total indicator reading. 'K' is length of bore for pilot bearing; 'L' is nominal diameter of bearing. Diameter and fit are to suit installation. Maximum eccentricity is 0.13 (0.005) total indicator reading. (See footnote b.)

^cTapped holes shall 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.

^eTolerances for dimensions 'G' and 'E' not to exceed the tolerance for 'E' as defined in SAE J617. Identical to flywheel No. 500 in SAE J162 (cancelled) except for 'G' dimension which was 25.4 (1.00), and 'H' dimension which was 28.4 (1.12). A spacer can be used between flywheel and coupler for equipment designed to the old specification.

^fIdentical to flywheel No. 511 in SAE J162 (cancelled).

^gIdentical to flywheel No. 514 in SAE J162 (cancelled).

^hIdentical to flywheel No. 518 in SAE J162 (cancelled).

ⁱIdentical to flywheel No. 521 in SAE J162 (cancelled).

^jPilot bearing bores, as defined by dimensions 'E', 'K', and 'L' are not typically required on flywheels for single bearing engine mounted power generators, and marine gears.