Model SP111P and SP211P Series

STANDARD SP CLUTCH

SP111P • SP211P

QUALITY IS STANDARD

- AVAILABLE IN SIZES 11.5" THRU 21.0"
- TAPERED ROLLER MAIN BEARINGS
- OPTIONAL SINTERED IRON PLATES
- OPTIONAL BALL BEARING THROW OUT
- BUILT IN HEX NUT
- CREATES SUITABLE APPLICATION TORQUE CAPACITY
- MORE SUITABLE FOR SIDE LOAD APPLICATIONS
- CREATES 25% HIGHER TORQUE CAPACITY
- ALLOWS FOR MORE FREQUENT ENGAGEMENTS
- EASES ADJUSTMENT VERIFICATION

SPECIFICATIONS – SP111P & SP211P

Model Number	SAE HSG.	Max. Input Torque Nm (lb-ft)		Maximum Safe Speed				Weight kg (lbs)
				Solid Plates		Split Plates		
		Organic	Sintered	Cast Drive Ring	Nodular Drive Ring	Cast Drive Ring	Nodular Drive Ring	
SP111P1, SP111P2, SP111P3	1, 2, 3	617 (455)	746 (550)	2850	3600	2200	3200	58 (129)
SP211P1, SP211P2, SP211P3		1235 (910)	1493 (1100)		3000		3000	79 (175)

LOAD CLASSIFICATIONS BASED UPON AGMA LOAD CHARACTERISTICS

PRIME MOVER	DURATION OF SERVICE	DRIVEN MACHINE LOAD CLASSIFICATIONS		
		UNIFORM	MODERATE SHOCK	HEAVY SHOCK
Electric motor	Up to 3 hours per day	1.00	1.25	1.50
	3–10 hours per day	1.00	1.25	1.75
	Over 10 hours per day	1.25	1.50	2.00
Multi-cylinder internal combustion engine	Up to 3 hours per day	1.00	1.25	1.75
	3–10 hours per day	1.25	1.50	2.00
	Over 10 hours per day	1.50	1.75	2.25
Multi-cylinder internal combustion engine with high torque rise	Up to 3 hours per day	1.50	1.75	2.25
	3–10 hours per day	1.75	2.00	2.50
	Over 10 hours per day	2.00	2.25	2.75
Single cylinder internal combustion engine	Up to 3 hours per day	1.25	1.50	2.00
	3–10 hours per day	1.50	1.75	2.25
	Over 10 hours per day	1.75	2.00	2.50

All clutch engagements to be with prime mover below 1000 RPM. High inertia loads may require use of larger clutch.
Contact Twin Disc application engineering department for assistance.

TO CALCULATE APPLICATION TORQUE:

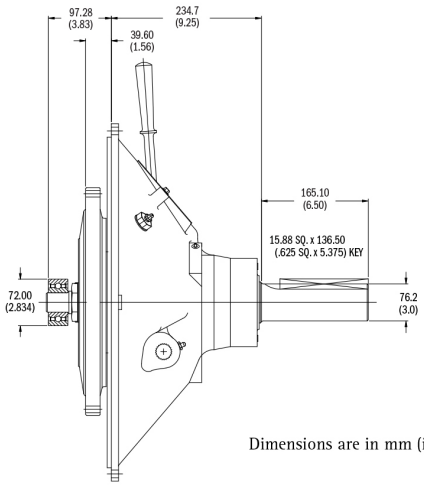
$$\frac{5252 \times HP}{Engine\ RPM} = Torque$$

Torque x Load Factor = Application Torque

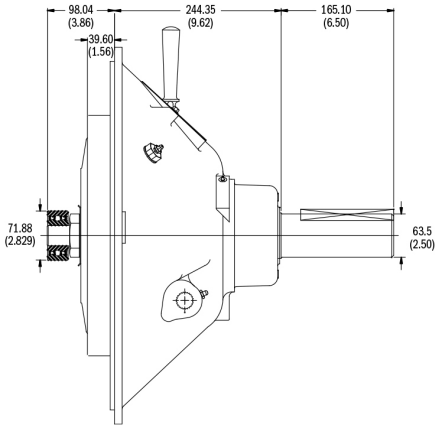
Use load factor from chart at left

Specifications subject to change without prior notice in the interest of continual product improvement.
Contact your local Twin Disc representative for engineering specifications.

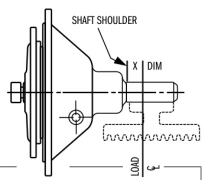
SP111P



SP211P



Dimensions are in mm (inches)



SP111P & SP211P – ALLOWABLE SIDE LOAD, KG (LBS)

PTO MODEL	RPM	X DISTANCE, mm (in) – see sketch					
		25.4 (1.0)	50.8 (2.0)	76.2 (3.0)	101.6 (4.0)	127.0 (5.0)	152.4 (6.0)
SP111P1	1000	1383 (3050)	1156 (2550)	907 (2000)	748 (1650)	635 (1400)	N/A
	1200	1315 (2900)					
SP111P2	1800	1161 (2560)	1075 (2370)				
SP111P3	2400	1061 (2340)	984 (2170)				
	2800	1014 (2235)	938 (2070)	873 (1925)			
SP211P1	1000	2059 (4540)	1540 (3395)	1229 (2710)	1159 (2555)	875 (1930)	766 (1690)
	1200	1982 (4370)					
SP211P2	1800	1769 (3900)					
SP211P3	2400	1610 (3550)	1510 (3330)				
	2800	1538 (3390)	1436 (3165)				

The following general formula should be used for determining the actual applied load: $L = \frac{126{,}000 \times HP}{N \times D} \times F \times LF$

WHERE L = Actual Applied Load (lbs)
N = Shaft Speed (RPM)
D = Pitch Diameter (in) of Sheave, etc.
F = Load Factor
1.0 for Chain or Gear Drive, 1.5 for Timing Belts, 2.5 for All V Belts, 3.5 for Flat Belts
LF = 2.1 for Reciprocating Compressors and other Severe Shock Drives and 1.8 for Large Inertia Type Drives (i.e. crushers, chippers, planers, etc.)

Compound Drives and Power Engaged Power Take-Off applications must have written factory review.

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