Model SP218P and SP318P Series

STANDARD SP CLUTCH

SP218P • SP318P

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 SIDE LOAD APPLICATIONS
- CREATES 25% HIGHER TORQUE CAPACITY
- ALLOWS FOR MORE FREQUENT ENGAGEMENTS
- EASES ADJUSTMENT VERIFICATION

SPECIFICATIONS – SP218P & SP318P

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	
SP218P0	0	5427 (4000)	6784 (5000)	1950	N/A	1550	N/A	299 (660)
SP218P00	00							
SP318P0	0	8141 (6000)	10176 (7500)	2050	2350	1550	2100	318 (700)

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.

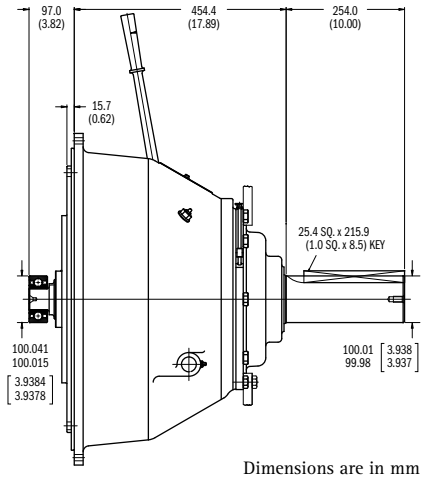
TO CALCULATE APPLICATION TORQUE:

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

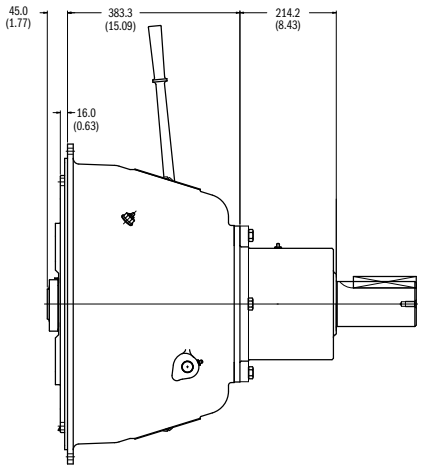
Torque x Load Factor = Application Torque

Use load factor from chart at left

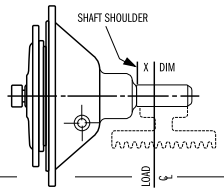
SP218P



SP318P



Dimensions are in mm (inches)



SP218P & SP318P – 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)	177.8 (7.0)	203.2 (8.0)	228.6 (9.0)
SP218P M2713	1000	4127 (9099)	3947 (8701)	3781 (8336)	3628 (8000)	3360 (7407)	2966 (6539)	2655 (5854)	2403 (5298)	2195 (4839)
	1200	3909 (8617)	3738 (8240)	3580 (7894)	3436 (7576)	3303 (7283)				
	1800	3461 (7631)	3310 (7297)	3035 (6991)	3043 (6709)	2925 (6450)	2816 (6210)			
	2400	3177 (7004)	3038 (6697)	2910 (6416)	2793 (6158)	2685 (5920)	2585 (5699)			
SP218P M2327	1000	4127 (9099)	3947 (8701)	3531 (7785)	2990 (6594)	2495 (5720)	2290 (5050)	2050 (4521)	1856 (4092)	1692 (3731)
	1200	3909 (8617)	3738 (8240)							
	1800	3461 (7631)	3310 (7297)	3035 (6991)						
	2400	3177 (7004)	3038 (6697)	2910 (6416)	2793 (6158)					
SP218P M2977	1000	4127 (9099)	3947 (8701)	3781 (8336)	3628 (8000)	3488 (7690)	3558 (7404)	3146 (6937)	2848 (6278)	2600 (5734)
	1200	3909 (8617)	3738 (8240)	3580 (7894)	3436 (7576)	3303 (7283)	3180 (7012)	3066 (6760)		
	1800	3461 (7631)	3310 (7297)	3035 (6991)	3043 (6709)	2925 (6450)	2816 (6210)	2715 (5987)	2621 (5779)	2533 (5585)
	2400	3177 (7004)	3038 (6697)	2910 (6416)	2793 (6158)	2685 (5920)	2585 (5699)	2492 (5494)	2405 (5304)	2325 (5126)
SP318P0	1000	3629 (8000)	3470 (7650)	3329 (7340)	3193 (7040)	3080 (6790)	2962 (6530)	2776 (6120)	2531 (5580)	2313 (5100)
	1200	3447 (7600)	3311 (7300)	3175 (7000)	3039 (6700)	2926 (6450)	2817 (6210)	2722 (6000)		
	1800	3003 (6620)	2880 (6350)	2758 (6080)	2649 (5840)	2359 (5200)	2486 (5400)	2368 (5220)	2282 (5030)	2200 (4850)

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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Twin Disc, Incorporated
Racine, Wisconsin 53403 USA
Phone +1-262-638-4000
Fax +1-262-638-4482
www.twindisc.com

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