

HUDSON PRODUCTS CORPORATION
Tuf-Lite FAN SELECTION APPLICATION
Version 5.0, Released 4/04/04

PROPOSAL INFORMATION

Prepared By : S. LOPACKI	Inquiry Number :
Preparer : S. LOPACKI	Item Number :
Customer Name : CIE	Run Date : 6-5-2007
Job Number : 73338	

FAN SELECTION INPUT DATA

Fan Application : Induced Draft Cooling Tower

Fan Diameter : 14.00 ft	Motor Effy (%/100) :
Blade Type : H	Drive Effy (%/100) :
No. of Blades : 8	
Req'd Air Flowrate: 316690 cfm	
Req'd Stat Press : 0.760 in wg	Min RF Marg Limit : 5.0 %
Air Density : 0.0690 lb/f3	Support Beams : 4
Air Temp. :	Max Sound Power Level :
Elevation :	Inlet Bell : Conical, R/D = 0.15
Venturi Height : 6.0 ft	Optimization : Power

FAN SELECTION RESULTS

Recommended Fan Selection: 14H-8

Fan Diameter : 14.00 ft	Min RF Margin : 20.6 %
Blade Type : H	First Mode RF : 14.4 hz
No. of Blades : 8	Blade Pass Freq : 36.3 hz
Calc'd Blade Pitch : 14.8 deg	Beam Pass Freq : 18.1 hz
Fan Speed : 272.0 rpm	1 x RPM Freq : 4.5 hz
Fan Tip Speed : 11963 fpm	Totl Fan Pressure: 0.966 in wg
	Velocity Pressure: 0.280 in wg
Motor Power :	Velocity Recovery: 0.083 in wg
Fan Shaft Power : 64.3 hp	Inlet Losses : 0.008 in wg
Power Per Blade : 8.0 hp	Mass Air Flowrate: 1311097 lbm/hr
Max Power Per Blade: 10.0 hp	Air Density : 0.0690 lbm/f3
Fan Total Effy : 74.9 %	Rot Inertia (WR2): 2772 lbm-f2
Fan Static Effy : 58.9 %	Total Fan Weight : 389 lbf
	Total Axial Load : 1107 lbf

Noise Sound Power Level (PWL) Per Fan: 102.0 dba

Octave Bands (hz):	31.5	63	125	250	500	1k	2k	4k	8k
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PWL (decibels) :	104.0	107.2	106.0	102.9	97.5	97.1	91.9	89.4	82.1

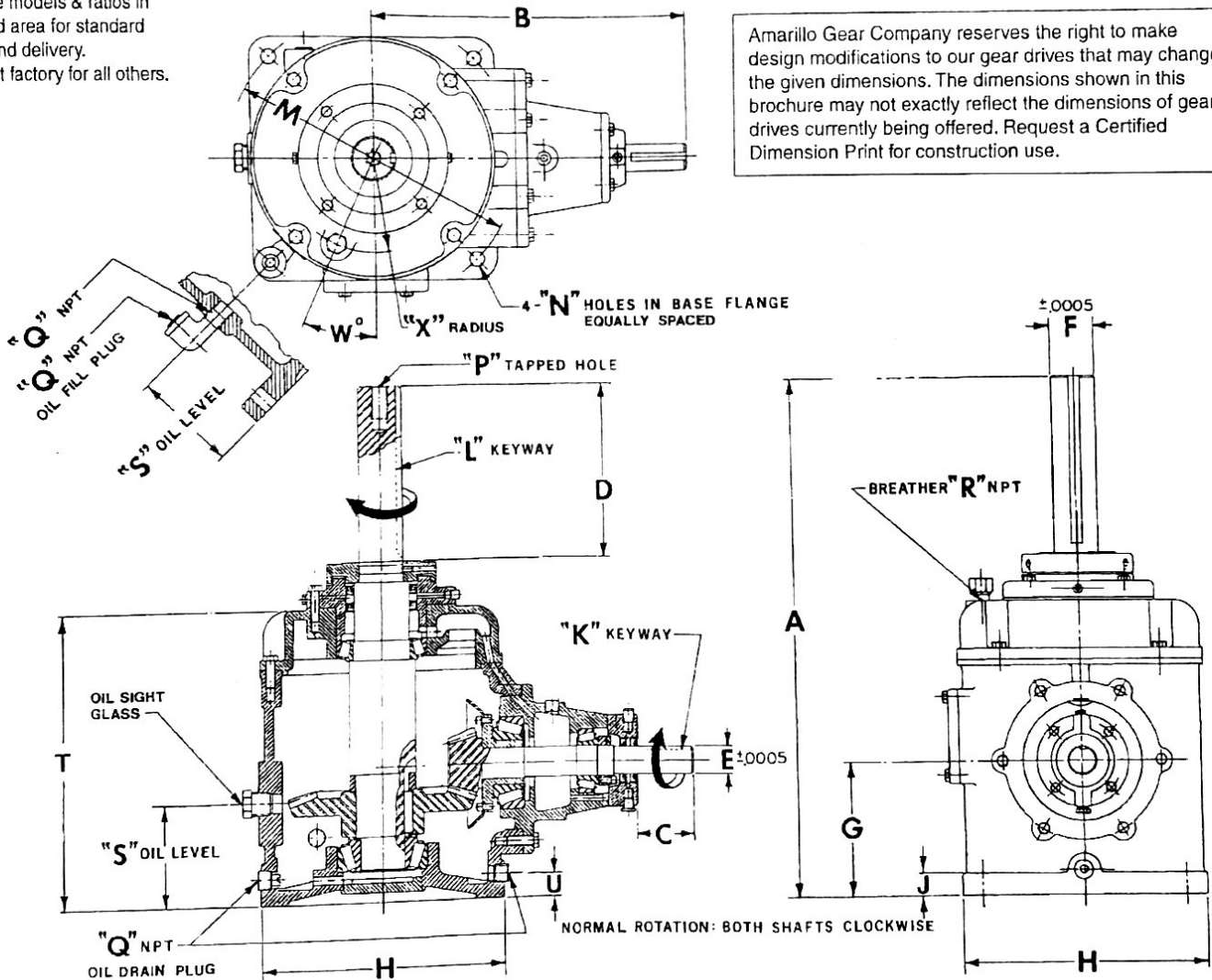
Hudson Products fan ratings are the result of the tests run under ideal conditions. Since actual conditions will vary and are beyond Hudson Products' control, Hudson Products makes no warranties or guarantees concerning fan performance, and all such warranties or guarantees, including merchantability and fitness for a particular purpose, are disclaimed.

TABLE I - SINGLE REDUCTION

Service Horsepower Ratings (Service Factor = 2.0)																					
Model	Input RPM	Ratio																			
		2.0	2.5	3.0	3.25	3.5	3.75	4.0	4.25	4.5	4.75	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5
65	1750	25	25	20	18	17		15		12		10									
	1450	21	21	17	15	14		12		10		8									
	1160	17	17	13	12	11		10		8		7									
85	1750	50	48	45	43	39	36	33	32	28	27	25	20	18	15	15					
	1450	41	40	37	36	32	30	27	26	23	22	21	17	15	12	12					
	1160	33	32	30	29	26	24	22	21	19	18	17	13	12	10	10					
110	1750					75	74	72	71	69	64	60	46	40	33	30	25	24			
	1450					62	61	60	59	57	53	50	38	33	27	25	21	20			
	1160					50	49	48	47	46	42	40	30	27	22	20	17	16			
135	1750					120	117	110	100	93	88	83	71	65	59	48	43	42	35	30	
	1450					99	97	91	83	77	73	69	59	54	49	40	36	35	29	25	
	1160					80	78	73	66	62	58	55	47	43	39	32	29	28	23	20	
155	1750							133	125	119	114	110	100	90	85	75	65	55	50	45	
	1450							110	104	99	94	91	83	75	70	62	54	46	41	37	
	1160							88	83	79	76	73	66	60	56	50	43	36	33	30	
175	1750									145	140	133	126	112	105	100	80	60	60	60	50
	1450									120	116	110	104	92	87	83	66	50	50	50	41
	1160									96	93	88	84	74	70	66	53	40	40	40	33

Choose models & ratios in outlined area for standard price and delivery. Contact factory for all others.

Amarillo Gear Company reserves the right to make design modifications to our gear drives that may change the given dimensions. The dimensions shown in this brochure may not exactly reflect the dimensions of gear drives currently being offered. Request a Certified Dimension Print for construction use.


TABLE II - DIMENSIONS

Model	A	B	C	C with Non-Reverse	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X	WEIGHT
* 65	17 ³ / ₄	10 ⁷ / ₈	2 ¹ / ₄	2 ¹ / ₄	6	.999	1.749	5	10	5/8	1/4 x 1/8	3/8 x 3/16	9/8	1/8	3/4-10NC	1/2	1/2	5	9 ¹ / ₂	7/8	15	3 ¹ / ₄	90
85	23 ¹ / ₄	14 ¹ / ₄	2 ¹¹ / ₁₆	1 ¹³ / ₃₂	8	1.249	1.999	6	11	1	5/16 x 5/32	1/2 x 1/4	13	11/16	3/4-10NC	1/2	1/2	4 ¹ / ₁₆	13 ¹ / ₄	1 ¹ / ₁₆	0	4 ⁵ / ₁₆	195
110	26 ¹ / ₂	17 ⁵ / ₈	3 ⁵ / ₁₆	2 ¹ / ₁₆	8 ¹ / ₂	1.499	2.374	7	13 ¹ / ₂	1 ¹ / ₈	3/8 x 3/16	5/8 x 5/16	16	11/16	3/4-10NC	3/4	1/2	5 ¹ / ₂	15 ⁵ / ₈	1 ¹ / ₁₆	0	4 ⁵ / ₈	325
135	29 ⁵ / ₈	21	3 ³ / ₄	2 ⁵ / ₁₆	9	1.874	2.624	8	16	1 ¹ / ₄	3/8 x 3/16	3/4 x 3/8	20	11/16	3/4-10NC	3/4	1/2	6	18 ¹ / ₈	1 ³ / ₈	54	5	500
155	31 ¹ / ₁₆	23 ¹ / ₁₆	3 ⁷ / ₈	2 ¹ / ₂	9 ¹ / ₂	1.874	2.999	9 ¹ / ₂	19	1 ¹ / ₄	3/8 x 3/16	3/4 x 3/8	22	11/16	3/4-10NC	3/4	1/2	7	19 ³ / ₄	1 ³ / ₈	54	6 ⁵ / ₈	675
175	33 ³ / ₈	23 ¹ / ₂	3 ¹⁵ / ₁₆	2 ¹ / ₈	9 ¹ / ₂	1.874	2.999	9 ¹ / ₂	20 ¹ / ₂	1 ¹ / ₂	3/8 x 3/16	3/4 x 3/8	25	11/16	3/4-10NC	3/4	1/2	7 ¹ / ₂	21 ¹ / ₂	1 ¹ / ₂	54	7	825

* Model 65 has a 10" Diameter Base