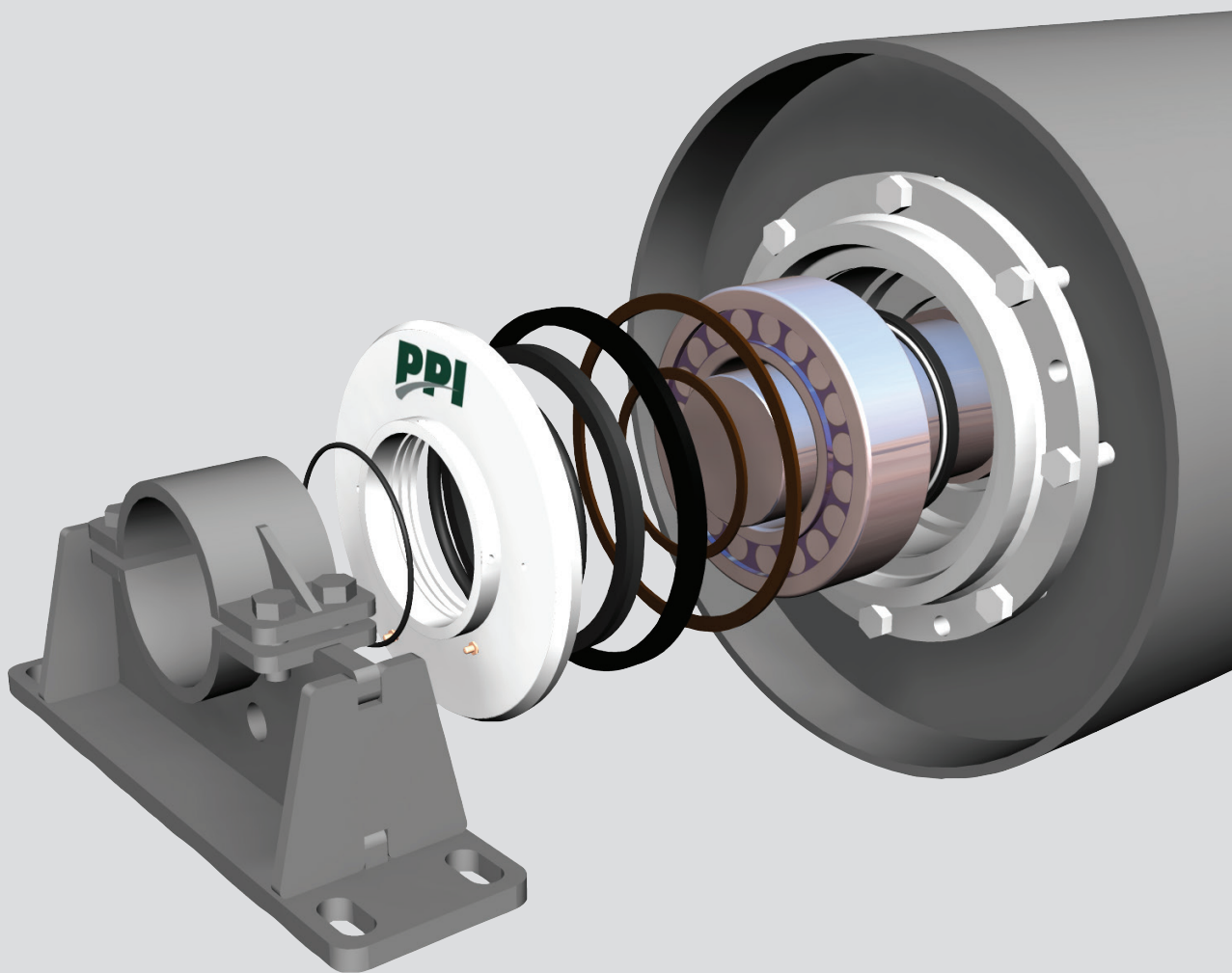
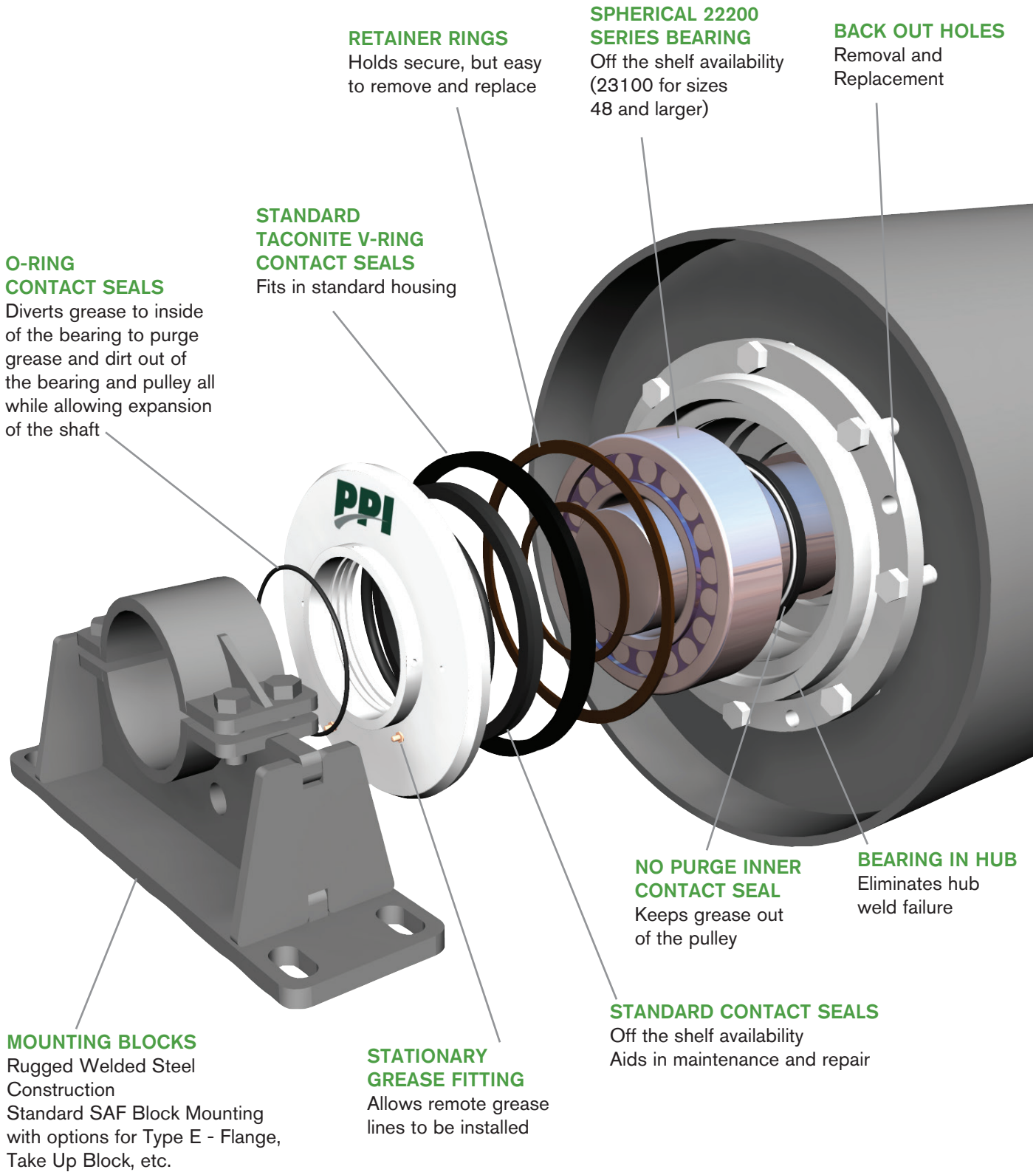


Engineering & Dimensions

# STATIC SHAFT PULLEYS



# Static Shaft Pulley (SSP®) Components



# Static Shaft Pulley (SSP) Selection

## RESULTANT LOAD

RL = Tension (T) \_\_\_\_\_ \*Wrap Factor (WF) \_\_\_\_\_ = \_\_\_\_\_

WF is calculated as  $= 2 * \sin(\text{wrap}/2)$  or you can use the common values listed below:

*Snub (30°) = 0.5176 Bend (75°) = 1.2175 (90°) = 1.4142 (105°) = 1.5867 TU (180°) = 2.0*

From page 4/5, determine the SSP size required by comparing the resultant load (RL) to the Shaft Rating for - block centers (BC) minus the facewidth (FW). SSP = \_\_\_\_\_

## POUNDS PER INCH WIDTH (PIW)

PIW = Tension (T) \_\_\_\_\_ \*Bend Factor (BF) \_\_\_\_\_ / Belt Width (BW) \_\_\_\_\_ = \_\_\_\_\_

*BF = 1.00 (for 105-210° of belt wrap), 1.33 (for 70-100°), 1.5 (for 60-65°), 2.0 (for 0-55°)*

From page 4/5, compare the PIW rating of the pulley versus the actual PIW and increase the SSP size if necessary.

SSP = \_\_\_\_\_ XHD/MD

## BEARING RATING (CM FOR C MINIMUM)

CM = RL \_\_\_\_\_ \*Bearing Life Factor (BLF) \_\_\_\_\_ = \_\_\_\_\_

BLF is from page 7 or can be calculated as  $((B10 * FPM / 4363.7 / OD) ^{0.3})/2$

From page 4/5, compare the CM to the C rating for the SSP and increase the SSP size if necessary.

SSP = \_\_\_\_\_

## MINIMUM LOAD RATING NEEDED FOR THE MOUNTING BLOCK

LR = RL \_\_\_\_\_ / 2 = \_\_\_\_\_

From the top of page 6, compare the load rating required against the actual AND min/max block at the bottom of page 5.

Mounting Block Size \_\_\_\_\_

Final SSP Selection = \_\_\_\_\_ XHD/MD

(use the size that satisfies all criteria)

SSP* HUB SIZES	
SIZE	BORE
15	2.953
20	3.937
22	4.331
24	4.724
26	5.118
28	5.512
30	5.906
32	6.299
34	6.693
36	7.087
38	7.480
44	8.661
48	9.449
52	10.236
56	11.024
60	11.811

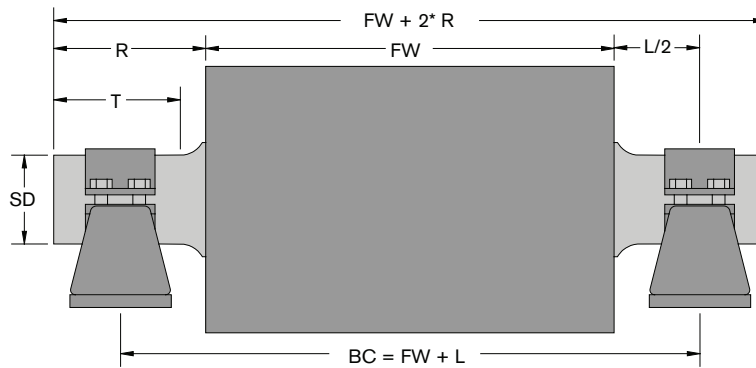
For other sizes contact  
your sales representative

# Static Shaft Pulley (SSP) Load Ratings

SSP Size	Shaft Size (in)	Dynamic Load Rating C (lb)	Extra Heavy Duty PIW Rating (lb / in)	MAX Duty PIW Rating (lb / in)	BC - Face (L) (in)	Shaft Rating (lb)			
						Pulley Face Width			
						51	57	66	78
15	2.953	69,000	200	300	4	14,800	13,100	11,100	9,300
			OD>=14	OD>=14	6	12,300	10,900	9,300	7,800
			320	500	8	10,600	9,400	8,000	6,700
					12	8,300	7,300	6,300	5,200
20	3.937	69,000	300	600	5	33,400	31,300	26,700	22,400
			OD>=24		8	26,100	24,500	20,900	17,500
			550		11	21,500	20,100	17,200	14,400
					14	18,200	17,100	14,600	12,200
22	4.331	91,700	360	700	6	40,300	34,300	28,700	
			OD>=24		9	32,200	27,400	22,900	
			550		12	26,800	22,800	19,100	
					15	22,900	19,500	16,300	
24	4.724	105,000	360	700	7	47,800	43,300	36,200	
			OD>=24		10	38,800	35,200	29,400	
			550		13	32,700	29,600	24,800	
					16	28,200	25,600	21,400	
26	5.118	123,000	410	700	7	56,400	52,330		
			OD>=30		10	46,500	43,096		
			600		13	39,500	36,631		
					16	34,300	31,853		
28	5.512	137,000	530	1,100	8	65,800	63,800		
			OD>=30		11	54,800	53,200		
			710		15	44,800	43,500		
					17	41,100	39,900		
30	5.906	166,000	530	1,100	8	75,300			
			OD>=30		11	63,500			
			710		15	52,500			
					17	48,300			
32	6.299	194,000	530	1,100	8	91,300			
			OD>=30		11	77,000			
			710		15	63,700			
					18	56,400			
34	6.693	220,000	615	1,700	8	103,900			
			OD>=36		11	88,300			
			720		15	73,600			
					19	63,100			
36	7.087	227,000	615	1,800	10	110,400			
			OD>=36		14	91,200			
			720		18	77,700			
					22	67,600			
38	7.480	250,000	615	1,800	10	128,100			
			OD>=36		14	106,000			
			720		18	90,500			
					22	78,900			
44	8.661	342,000	1,100	2,400	12	159,500			
					16	136,700			
					20	119,600			
					24	106,300			
48	9.449	402,000	1,100	2,400	14	191,100			
					20	155,300			
					24	138,000			
					28	124,200			

# Static Shaft Pulley (SSP) Load Ratings

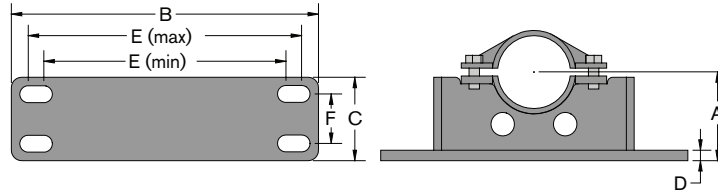
SSP Size	Shaft Size (in)	Dynamic Load Rating C (lb)	Extra Heavy Duty PIW Rating (lb / in)	MAX Duty PIW Rating (lb / in)	BC - Face (L) (in)	Shaft Rating (lb)			
						Pulley Face Width			
						51	57	66	78
52	10.236	499,000	CONTACT PPI ENGINEERING DEPARTMENT						
56	11.024	517,000	CONTACT PPI ENGINEERING DEPARTMENT						
60	11.811	634,000	CONTACT PPI ENGINEERING DEPARTMENT						



SHAFT DIMENSIONS

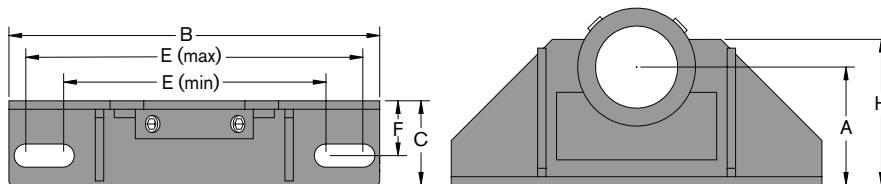
SSP Size	SHAFT DATA				L			Block Sizes	
	R	R-wide	T	SD	min	max	max-wide	min	max
15	7	12	6 1/2	2 7/16	5	11 1/4	21 1/4	See SetScrew Blocks	
20	7 5/8	12 1/8	7 3/16	3 1/2	5	12 1/2	22 1/2	F515	F526
22	8 1/4	13 3/4	7 13/16	4	6 5/8	13 3/4	24 3/4	F517	F528
24	8 3/4	14 1/2	8 3/8	4 1/2	6 5/8	14 3/4	26 1/4	F520	F532
26	8 3/4	14 1/2	8 1/2	5	6 5/8	14 1/4	25 3/4	F522	F534
28	9 1/4	15 1/2	8 11/16	5	7	15 1/4	27 3/4	F522	F534
30	9 1/4	15 1/2	8 11/16	5 1/2	7	15 1/4	27 3/4	F526	F536
32	9 3/4	16 1/4	9 1/4	6	8 1/4	15 1/2	28 1/2	F528	F538
34	10 1/4	17 1/4	9 13/16	6 1/2	8 1/4	16 1/2	30 1/2	F528	F538
36	11 3/4	18 3/4	11 1/2	7	8 1/4	19 1/2	33 1/2	F532	F544
38	11 3/4	18 3/4	11 1/8	7	9	19 1/2	33 1/2	F532	F544
44	14	20	13 1/4	8	11	24	36	F536	F152
48	16	21	15 3/8	9	12 1/2	28	38	F538	F156
52	16	21	15 3/8	9	12 1/2	28	38	F538	F160
56	16	21	15 3/8	10	12 1/2	28	38	F152	F164
60	16	21	15 3/8	11	12 1/2	28	38	F152	F168

# Static Shaft Pulley (SSP) Load Ratings



4 BOLT MOUNTING BLOCK DIMENSIONS AND LOAD RATINGS

Block Size	Load Rating	A	B	C	D	E		F	Bolt Size
						max	min		
F515	9,000	3 1/4	10 7/8	3 1/8	1/2	9 5/8	8 5/8	1 7/8	1/2
F517	12,000	3 3/4	12 1/2	3 1/2	1/2	11	9 7/8	2 1/8	5/8
F520	15,000	4 1/2	14 3/4	4	3/4	13 1/8	11 5/8	2 3/8	3/4
F522	20,000	4 15/16	16 1/8	4 3/8	3/4	14 1/2	12 5/8	2 3/4	3/4
F526	28,000	6	18	5 1/8	3/4	16	14 5/8	3 1/4	7/8
F528	33,000	6	19 1/4	5 7/16	3/4	17 1/8	16	3 3/8	1
F532	40,000	6 11/16	21 3/8	5 7/8	3/4	19 1/4	17 3/8	3 3/4	1
F534	45,000	7 1/16	23 3/4	6 3/8	3/4	21 5/8	19 3/8	4 1/4	1
F536	50,000	7 1/2	25 3/4	6 3/4	3/4	23 5/8	20 7/8	4 5/8	1
F538	55,000	7 7/8	26 7/8	7	1	24 3/8	21 5/8	4 1/2	1 1/4
F540	55,000	8 1/4	27 1/2	7 1/2	1	25	22 1/2	5	1 1/4
F544	65,000	9 1/2	31 1/8	8 1/2	1	27 7/8	24 3/4	5 1/4	1 1/2
F148	80,000	9 1/2	32	10 1/2	1	27 7/8	25 5/8	7 1/4	1 1/2
F152	95,000	10 1/4	35	12 1/4	1	30 1/2	29	8 3/4	1 5/8
F156	125,000	12	38 1/4	12 1/2	1	33 1/2	32 3/4	9	1 5/8
F160	TBD	12	38 1/4	12 1/2	1	33 1/2	32 3/4	9	1 5/8
F164	TBD	12 13/16	41 3/4	14 1/2	1 1/2	36 1/2	35	10 1/2	1 7/8
F168	TBD	14	43 3/4	15	1 1/2	38 1/4	36 3/4	10 3/4	2



SETScrew MOUNTING BLOCK FOR SSP15 - 2 7/16 SHAFT EXTENSION DIAMETER

Original Pillow Block		Part Number	Bolt Dia.	A	B	C	BOLT SPACING (E)		F	H
Type	Bore						Min	MAX		
SCM	2 7/16	SOPB121207300	3/4	3	10 3/4	3 1/2	7 1/2	9 3/4	2 1/4	4
	2 15/16	SOPB141207308	7/8	3 1/2	12 3/16	4 1/8	8 3/8	11 5/16	2 7/8	4 1/8
E	2 7/16	SOPB103207212	5/8	2 3/4	11	2 3/8	7 13/16	10 3/8	1 1/2	4 1/2
	2 15/16	SOPB121207302	3/4	3 1/8	10 3/4	3 1/2	7 1/2	9 3/4	2 1/4	4
SAF	2 7/16	SOPB103207304	5/8	3 1/4	11	2 3/8	7 13/16	10 3/8	1 1/2	4 1/2
	2 15/16	SOPB122207312	3/4	3 3/4	12 5/8	3 1/2	9	11 7/8	2 1/4	4 1/2

# Static Shaft Pulley (SSP) Load Ratings

Belt Speed (FPM)	Pulley OD	Bearing Life Factor (BLF)							
		Life Hours							
		10,000	20,000	30,000	40,000	50,000	60,000	80,000	100,000
100	12	1.211	1.491	1.684	1.836	1.963	2.074	2.260	2.417
	14	1.157	1.424	1.608	1.753	1.874	1.980	2.158	2.308
	16	1.111	1.368	1.545	1.684	1.801	1.902	2.074	2.217
	18	1.073	1.321	1.491	1.626	1.738	1.836	2.002	2.140
	20	1.039	1.279	1.445	1.575	1.684	1.779	1.939	2.074
	24	0.984	1.211	1.368	1.491	1.595	1.684	1.836	1.963
	30	0.920	1.133	1.279	1.395	1.491	1.575	1.717	1.836
	36	0.871	1.073	1.211	1.321	1.412	1.491	1.626	1.738
	42	0.832	1.024	1.157	1.261	1.348	1.424	1.552	1.660
	48	0.799	0.984	1.111	1.211	1.295	1.368	1.491	1.595
	54	0.771	0.950	1.073	1.169	1.250	1.321	1.440	1.539
	60	0.747	0.920	1.039	1.133	1.211	1.279	1.395	1.491
300	12	1.684	2.074	2.342	2.553	2.730	2.883	3.143	3.360
	14	1.608	1.980	2.236	2.437	2.606	2.753	3.001	3.209
	16	1.545	1.902	2.148	2.342	2.504	2.645	2.883	3.083
	18	1.491	1.836	2.074	2.260	2.417	2.553	2.783	2.976
	20	1.445	1.779	2.009	2.190	2.342	2.473	2.696	2.883
	24	1.368	1.684	1.902	2.074	2.217	2.342	2.553	2.730
	30	1.279	1.575	1.779	1.939	2.074	2.190	2.387	2.553
	36	1.211	1.491	1.684	1.836	1.963	2.074	2.260	2.417
	42	1.157	1.424	1.608	1.753	1.874	1.980	2.158	2.308
	48	1.111	1.368	1.545	1.684	1.801	1.902	2.074	2.217
	54	1.073	1.321	1.491	1.626	1.738	1.836	2.002	2.140
	60	1.039	1.279	1.445	1.575	1.684	1.779	1.939	2.074
500	12	1.963	2.417	2.73	2.976	3.182	3.360	3.663	3.917
	14	1.874	2.308	2.606	2.841	3.038	3.209	3.498	3.740
	16	1.801	2.217	2.504	2.730	2.919	3.083	3.360	3.593
	18	1.738	2.140	2.417	2.635	2.817	2.976	3.244	3.468
	20	1.684	2.074	2.342	2.553	2.730	2.883	3.143	3.360
	24	1.595	1.963	2.217	2.417	2.584	2.730	2.976	3.182
	30	1.491	1.836	2.074	2.260	2.417	2.553	2.783	2.976
	36	1.412	1.738	1.963	2.140	2.288	2.417	2.635	2.817
	42	1.348	1.660	1.874	2.043	2.185	2.308	2.516	2.690
	48	1.295	1.595	1.801	1.963	2.099	2.217	2.417	2.584
	54	1.250	1.539	1.738	1.895	2.026	2.140	2.333	2.495
	60	1.211	1.491	1.684	1.836	1.963	2.074	2.260	2.417
750	12	2.217	2.730	3.083	3.360	3.593	3.795	4.137	4.424
	14	2.117	2.606	2.943	3.209	3.431	3.624	3.950	4.224
	16	2.034	2.504	2.828	3.083	3.296	3.481	3.795	4.058
	18	1.963	2.417	2.730	2.976	3.182	3.360	3.663	3.917
	20	1.902	2.342	2.645	2.883	3.083	3.256	3.549	3.795
	24	1.801	2.217	2.504	2.730	2.919	3.083	3.360	3.593
	30	1.684	2.074	2.342	2.553	2.730	2.883	3.143	3.360
	36	1.595	1.963	2.217	2.417	2.584	2.730	2.976	3.182
	42	1.523	1.874	2.117	2.308	2.467	2.606	2.841	3.038
	48	1.463	1.801	2.034	2.217	2.371	2.504	2.730	2.919
	54	1.412	1.738	1.963	2.140	2.288	2.417	2.635	2.817
	60	1.368	1.684	1.902	2.074	2.217	2.342	2.553	2.730



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