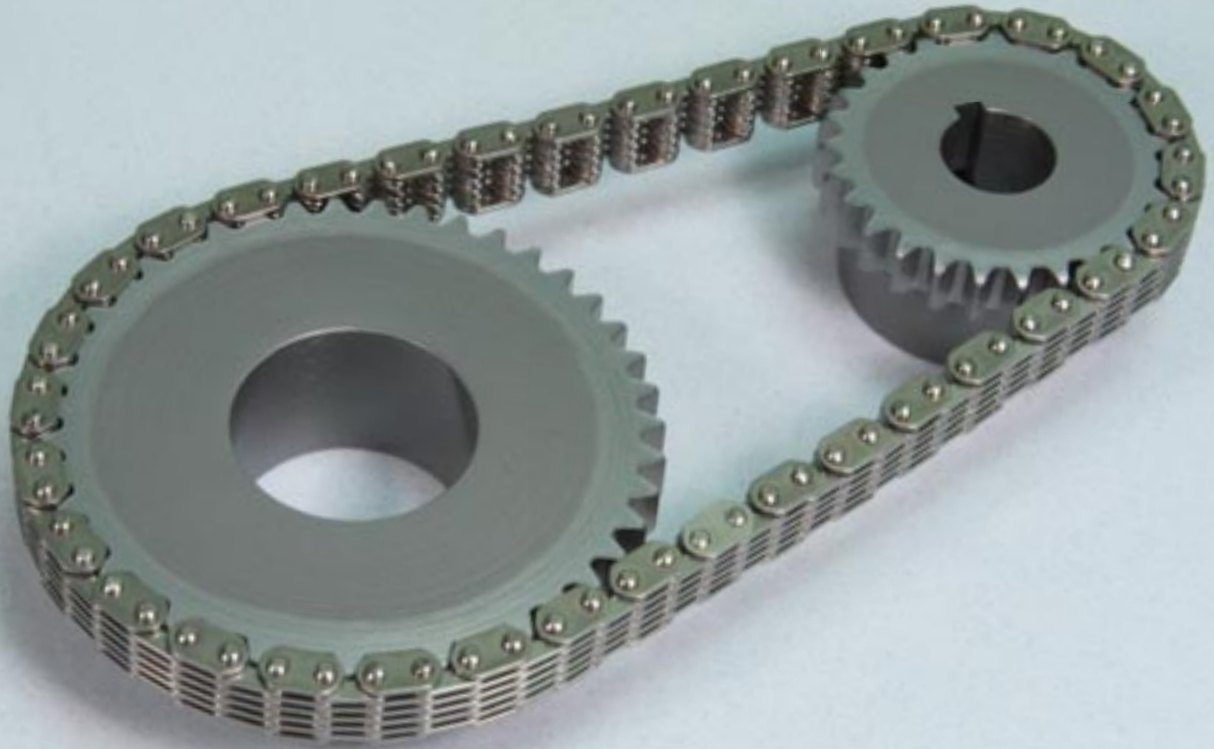


# 3/16" Pitch Silent Chain



PRECISION ENGINEERED

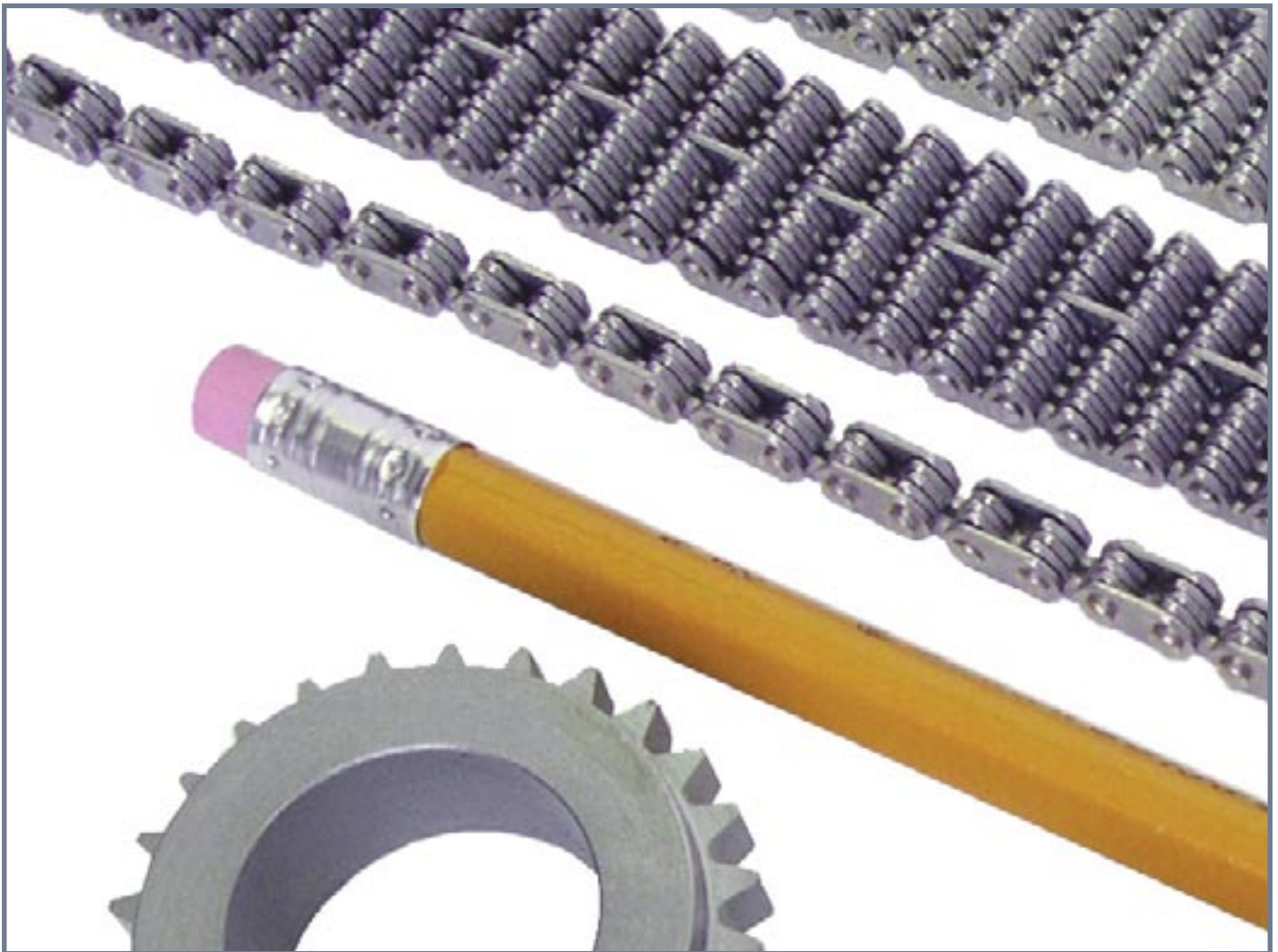


# Ramsey 3/16" Pitch Chain

Constructed from hardened, carbon steel or corrosion resistant, 304 stainless steel, Ramsey 3/16" pitch chain and sprockets are designed to bring smooth, quiet operation to fractional horsepower applications. Stainless chains are capable of running in mildly corrosive or wet environments without rusting. Available in 8 standard widths, all Ramsey 3/16" pitch chains feature a round pin joint that allows the chain to fully backbend. Chains and sprockets are manufactured to ASME standard B29.2M-2007 specifications. This makes Ramsey 3/16" pitch chains and sprockets well-suited for original or replacement applications.

## TYPICAL APPLICATIONS

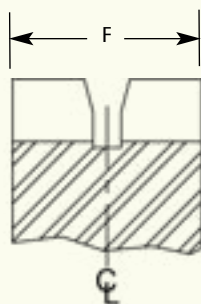
- Food Processing Equipment
- Packaging Machinery
- Conveyors
- Weighing Machinery
- Postage Meters
- Copying Machines
- Mail Sorting Machines



Ramsey Products Corporation has designed and manufactured silent chains for over 95 years. Today, we remain committed to providing our customers with the world's widest selection of top quality silent chain, unmatched service, and competitive pricing. We are eager to put our experience and expertise to work for you. We welcome the opportunity to discuss your application and provide you with a risk-free quotation.

## Standard Chain and Sprocket Dimensions

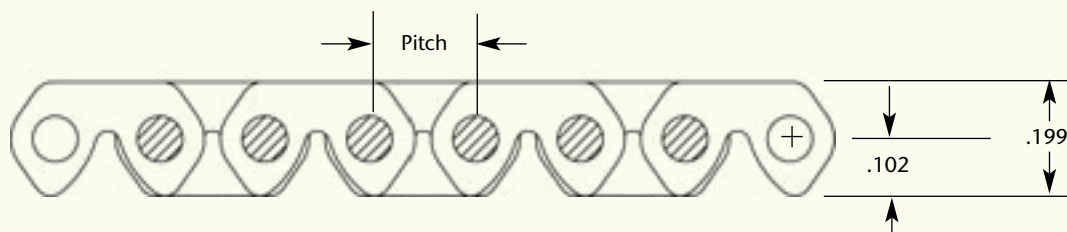
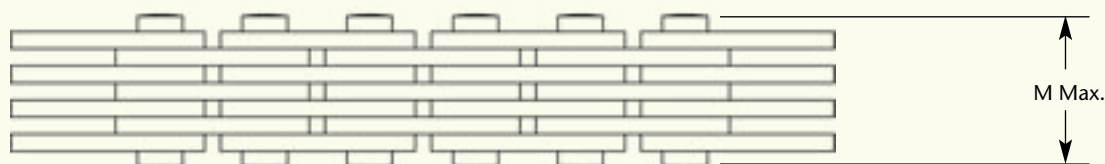
### SPROCKET PROFILES



Center Guide (CG)



Side Guide (SG)



#### STANDARD CHAIN AND SPROCKET DIMENSIONS

CHAIN NUMBER	TYPE	NOMINAL WIDTH	M MAX	SIDE GUIDE DIM. W	CENTER GUIDE DIM. F
SC0305	SG	5/32	.216	.075	-
SC0307	SG	7/32	.278	.138	-
SC0309	SG	9/32	.341	.201	-
SC0311	SG	11/32	.403	.264	-
SC0315	CG	11/32	.403	-	.334
	SG	15/32	.528	.390	-
SC0319	CG	15/32	.528	-	.459
	SG	19/32	.653	-	.584
SC0325	CG	25/32	.850	-	.771
SC0331	CG	31/32	1.028	-	.959

#### STANDARD KEYWAYS

DIAMETER OF SHAFT	KEYWAY WIDTH AND DEPTH
1/2 - 9/16	1/8 x 1/16
5/8 - 7/8	3/16 x 3/32
15/16 - 1-1/4	1/4 x 1/8

Dimensions are subject to change - Contact Ramsey for current specifications.

# Sprocket Diameters

## STANDARD SPROCKET DIAMETERS

NUMBER OF TEETH	PITCH DIAMETER	OUTSIDE DIAMETER	OVER PIN* DIAMETER	NUMBER OF TEETH	PITCH DIAMETER	OUTSIDE DIAMETER	OVER PIN DIAMETER	NUMBER OF TEETH	PITCH DIAMETER	OUTSIDE DIAMETER	OVER PIN DIAMETER
11	.665	.616	.691	48	2.867	2.850	2.934	84	5.015	5.003	5.085
12	.724	.676	.761	49	2.926	2.910	2.992	85	5.074	5.063	5.143
13	.783	.736	.831	50	2.986	2.970	3.053	86	5.134	5.123	5.204
14	.843	.797	.888	51	3.046	3.030	3.111	87	5.194	5.182	5.263
15	.902	.857	.946	52	3.105	3.090	3.173	88	5.253	5.242	5.323
16	.961	.918	1.012	53	3.165	3.150	3.231	89	5.313	5.302	5.382
17	1.020	.979	1.069	54	3.225	3.210	3.293	90	5.373	5.362	5.443
18	1.080	1.040	1.134	55	3.284	3.270	3.351	91	5.432	5.421	5.501
19	1.139	1.101	1.191	56	3.344	3.329	3.412	92	5.492	5.481	5.562
20	1.199	1.162	1.256	57	3.404	3.389	3.471	93	5.552	5.541	5.621
21	1.258	1.223	1.312	58	3.463	3.449	3.531	94	5.611	5.601	5.681
22	1.318	1.284	1.377	59	3.523	3.509	3.590	95	5.671	5.660	5.740
23	1.377	1.345	1.433	60	3.583	3.569	3.651	96	5.731	5.720	5.801
24	1.436	1.406	1.497	61	3.642	3.628	3.709	97	5.790	5.780	5.859
25	1.496	1.466	1.554	62	3.702	3.688	3.771	98	5.850	5.839	5.920
26	1.556	1.527	1.617	63	3.762	3.748	3.830	99	5.910	5.899	5.979
27	1.615	1.588	1.674	64	3.821	3.808	3.890	100	5.969	5.959	6.039
28	1.675	1.648	1.737	65	3.881	3.868	3.949	101	6.029	6.019	6.098
29	1.734	1.709	1.795	66	3.941	3.927	4.010	102	6.089	6.078	6.159
30	1.794	1.769	1.857	67	4.000	3.987	4.068	103	6.148	6.138	6.217
31	1.853	1.829	1.914	68	4.060	4.047	4.129	104	6.207	6.198	6.277
32	1.913	1.890	1.977	69	4.120	4.107	4.188	105	6.268	6.258	6.337
33	1.973	1.950	2.035	70	4.179	4.167	4.248	106	6.328	6.317	6.398
34	2.032	2.010	2.096	71	4.239	4.226	4.307	107	6.388	6.377	6.457
35	2.092	2.070	2.155	72	4.299	4.286	4.368	108	6.447	6.437	6.518
36	2.151	2.130	2.216	73	4.358	4.346	4.426	109	6.508	6.496	6.576
37	2.211	2.190	2.274	74	4.418	4.406	4.487	110	6.566	6.556	6.637
38	2.271	2.251	2.336	75	4.478	4.465	4.546	111	6.625	6.616	6.695
39	2.330	2.311	2.394	76	4.537	4.525	4.606	112	6.685	6.676	6.755
40	2.390	2.371	2.456	77	4.597	4.585	4.665	113	6.745	6.735	6.815
41	2.449	2.431	2.513	78	4.657	4.645	4.726	114	6.805	6.795	6.876
42	2.509	2.491	2.575	79	4.716	4.704	4.785	115	6.866	6.855	6.935
43	2.569	2.551	2.633	80	4.776	4.764	4.846	116	6.924	6.914	6.995
44	2.628	2.611	2.695	81	4.836	4.824	4.905	117	6.984	6.974	7.054
45	2.688	2.671	2.753	82	4.895	4.884	4.965	118	7.044	7.034	7.114
46	2.748	2.731	2.815	83	4.955	4.943	5.024	119	7.103	7.093	7.174
47	2.807	2.790	2.872					120	7.162	7.153	7.233
*for square top teeth											
**Gage Pin diameter = .125				Contact Ramsey for information on sprockets with more than 120 teeth							





# Horsepower Ratings

Ramsey Silent Chain is sold by the foot and can be supplied cut to length or in bulk coils. All chain lengths must be an even number of pitches as no offsets are available. One set of connecting parts is supplied with each chain, except for orders of 10 feet or more which are supplied with three sets of connecting parts for each 10 feet of chain.

## TO ORDER

Specify the width, guide type, the length of the chain and the connection desired, either open or endless. For sprockets, specify the width, number of teeth, bore, keyway if standard, and any other non-standard features.

## SERVICE FACTORS

To compensate for other than normal duty drives, a service factor is applied to the horsepower ratings. Consult Ramsey for service factors applicable to specific application.

## HORSEPOWER RATINGS

Tabulated ratings are for carbon steel chain. Stainless chain ratings are 50% of the values shown.

## TYPES OF LUBRICATION:

Manual/Drip lubrication is the most basic form of lubrication. Often chain life can be improved by using better methods such as oil bath or forced feed lubrication. We recommend that you select the best method of lubrication that is practical for your specific application.

HORSEPOWER RATINGS PER INCH OF CHAIN WIDTH

NO. OF TEETH SMALL SPROCKET	REVOLUTIONS PER MINUTE - SMALL SPROCKET						
	500	600	700	800	900	1200	1800
15	0.28	0.33	0.38	0.43	0.47	0.60	0.80
17	0.33	0.39	0.44	0.50	0.55	0.70	0.96
19	0.37	0.43	0.50	0.55	0.61	0.80	1.10
21	0.41	0.48	0.55	0.62	0.68	0.87	1.22
23	0.45	0.53	0.60	0.68	0.75	0.96	1.35
25	0.49	0.58	0.66	0.74	0.82	1.05	1.47
27	0.53	0.62	0.71	0.80	0.88	1.15	1.58
29	0.57	0.67	0.76	0.86	0.95	1.21	1.70
31	0.60	0.72	0.81	0.91	1.01	1.30	1.81
33	0.64	0.75	0.86	0.97	1.07	1.37	1.90
35	0.68	0.80	0.92	1.03	1.14	1.45	2.03
37	0.71	0.84	0.96	1.08	1.19	1.52	2.11
40	0.77	0.91	1.04	1.16	1.29	1.64	2.28
45	0.86	1.02	1.15	1.30	1.43	1.83	
50	0.95	1.12	1.27	1.37	1.58	2.00	

MANUAL/DRIP LUBRICATION

## STANDARD SET SCREWS

For sprockets with 11 to 23 teeth (inc.), the standard set screw is #8-32.

For sprockets with 24, 25 or 26 teeth, #10-24 will be provided.

For sprockets with 27 to 38 teeth, #1/4-20 will be used.

For all sprockets with 39 or more teeth, a set screw to suit will be provided.

## HUBS

Type B (one side) hubs are standard.

The standard hub projection is .375 for 11 thru 23 teeth.

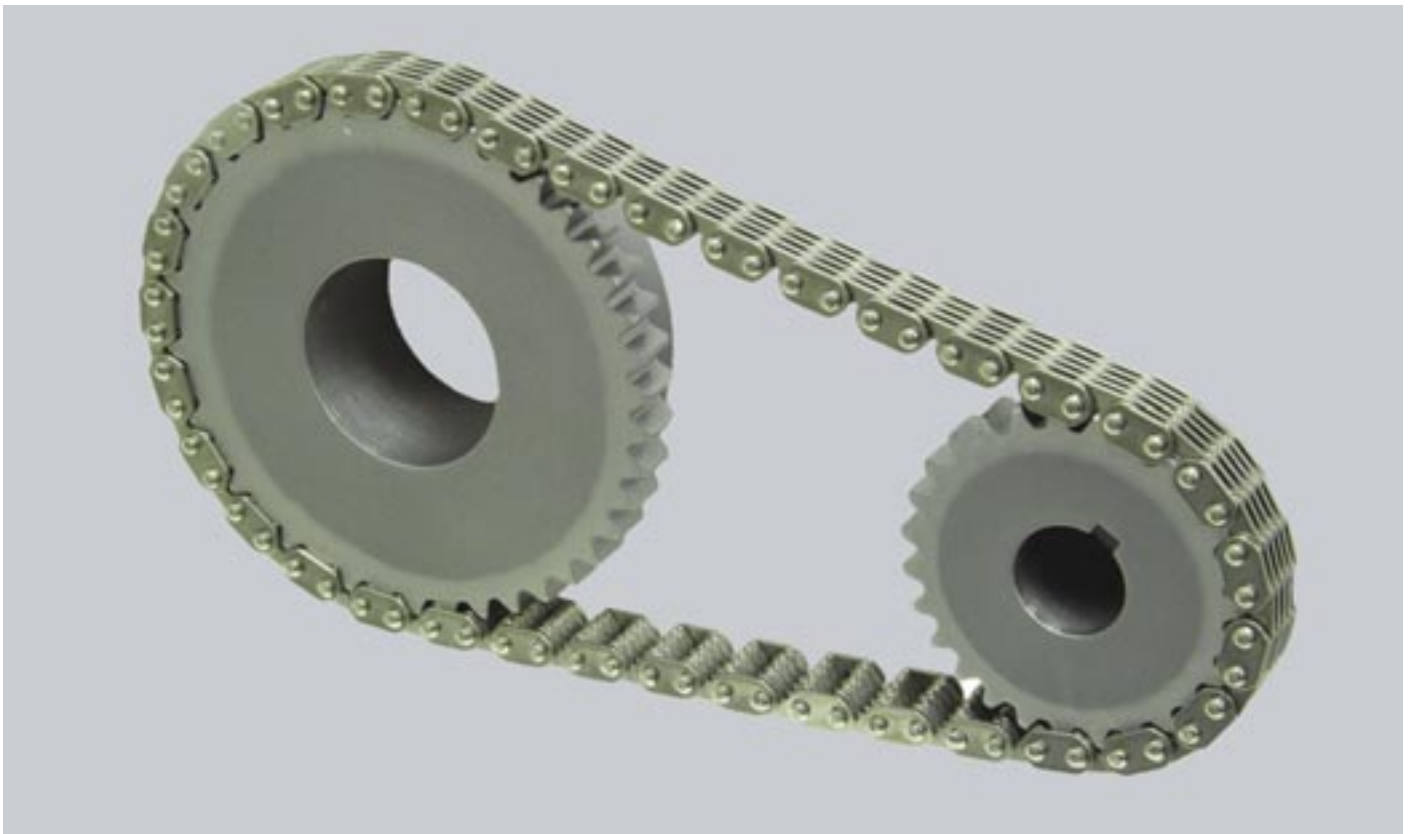
The standard hub projection is .500 and .750 for 39 and more teeth sprockets.

## GUARANTEED QUALITY

Ramsey 3/16" pitch chains are manufactured by Ramsey in the USA and are sold through power transmission distributors in the United States and throughout the world. Supported by eleven regional warehouses and the Belmont, North Carolina factory, prompt service to OEM and MRO customers is assured.

Ramsey warrants its products to be free of defects in material and workmanship. If, within one year of shipment, a Ramsey silent chain or sprocket is shown to have been defective at shipment, we will refund the purchase price or replace the item.

Ramsey believes the information in this manual is accurate and complete. However, because of the variety of applications in which our products are used, no warranties other than those for materials and workmanship are stated or implied. A complete warranty statement is available upon request.



# Drive Maintenance

## INSPECTION

Periodic drive inspection and adjustment will often result in increased service life and lower costs. An inspection should include sprocket alignment, tension, lubrication, and the general condition of chain and sprockets.

## TENSIONING AND ELONGATION

As a chain wears, its pitch will elongate and the chain will wrap an increasingly larger pitch circle. Re-tensioning of the chain will normally eliminate problems associated with excess chain slack. Also, with Ramsey chains this elongation occurs uniformly throughout the length of the chain so efficient, smooth operation is maintained.

However, when elongation becomes excessive the chain can skip teeth and damage the sprocket. It is best to replace the chain before this happens. The size of the large sprocket will limit the allowable elongation of the chain. In general, a chain will not properly wrap sprockets when it has elongated by  $200/N$  % where  $N$  = the number of teeth in the larger sprocket. Other application related considerations may further limit the amount of acceptable elongation.

## ALIGNMENT

Sprocket alignment must be maintained for optimum drive performance and chain life. Examine the sides of the chain guide links for excessive wear or gouging; these are often symptoms of misaligned sprockets.

Periodically check that sprockets are securely fastened. If sprocket position has changed since installation go through the alignment procedure used during installation.

## ENGINEERING FORMULAS

$p$  = pitch in inches  
 $Z$  = number of teeth in sprocket  
 $V$  = chain speed in feet per minute  
 $W$  = power in horsepower  
 $N$  = revolutions per minute  
 $P_d$  = pitch diameter in inches  
 $L$  = working load in pounds  
 $T$  = torque in inch pounds

$$W = \frac{TN}{63,025}$$

$$W = \frac{VL}{33,000}$$

$$P_d = \frac{p}{\sin(180/Z)}$$

$$L = \frac{396,000W}{pZN}$$

$$L = \frac{33,000W}{V}$$

$$V = \frac{pZN}{12}$$

$$T = \frac{LP_d}{2}$$

$$T = \frac{63,025W}{N}$$

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