

## PRESELECCION DE UNA CADENA DE RODILLOS REXNORD COMO CADENA DE TRANSMISION DE POTENCIA

Normalmente la selección de una cadena de rodillos para una transmisión mecánica tiene varias soluciones, se puede elegir una cadena simple o múltiple, con mayor o menor factor de servicio, con tamaños de piñones mayores o menores, todos estos factores influyen en la selección final.

Los datos necesarios para un cálculo son:

- Potencia a transmitir en kW
- Maquina motriz
- Mecanismo a accionar
- Velocidad en rpm de los piñones
- Distancia entre centros

- a) La tabla a continuación indica el factor de servicio a aplicar en función del tipo de aplicación, mecanismo a accionar y del tipo de maquina motriz.

Maquina a accionar	Maquina motriz		
	Motor combustión con transmisión hidráulica	Motor eléctrico	Motor combustión con transmisión mecánica
sin impacto	1	1	1,2
impactos medios	1,2	1,3	1,4
fuertes impactos	1,4	1,5	1,7

### Ejemplos de aplicaciones:

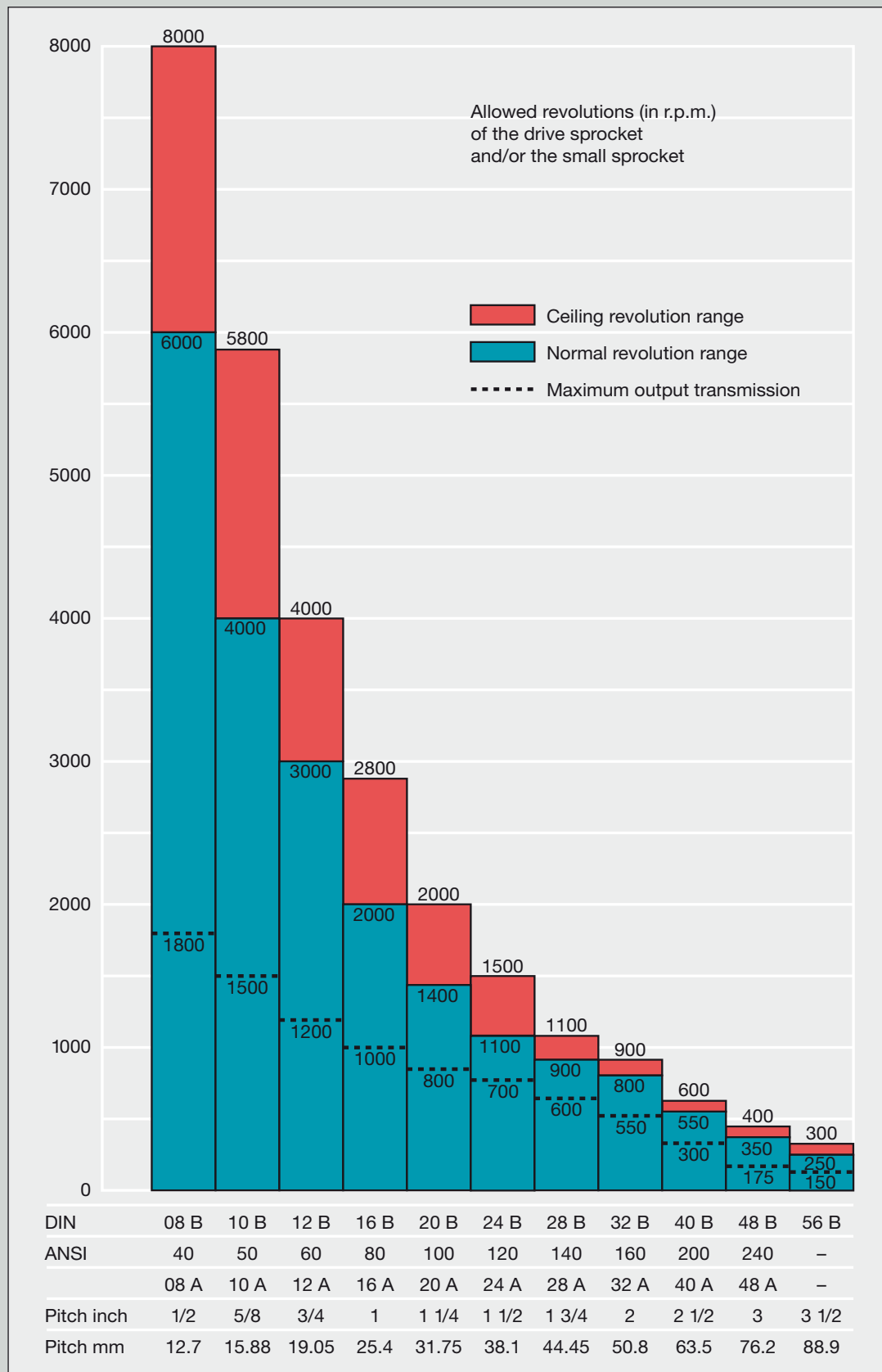
**Regular:** Agitadores de líquidos, bombas centrifugas, elevadores y transportadores de carga regular, generadores, ventiladores

**Irregular:** Agitadores de sustancias poco liquidas, bombas de cilindros, compresores alternativos, elevadores y transportadores con carga irregular, mezcladores, maquinaria para formar tubos, molinos de materias homogéneas.

**Con impactos:** Bombas de cilindros de 1 o 2 cilindros, dragas, excavadoras, transportadores con carga muy irregular y pesada, maquinaria de perforación, molinos de materias duras.

- b) La primera aproximación es en función de la velocidad máxima permitida en función del tamaño de cadena. La velocidad ideal para cada paso de cadena esta indicado con líneas de puntos -----.

## 5. The design tables



**Fig. 11:**  
Revolution bar chart  
for selecting the chain  
pitch depending on  
the drive sprocket  
revolution.

c) entramos en el diagrama de potencia a transmitir (afectada por el factor de servicio) y con el número de rpm del piñón motriz podemos tener una primera indicación del tamaño de la cadena que podría cumplir con los requisitos.

Se puede tomar en consideración las cadenas múltiples, utilizando la potencia a transmitir afectada del factor de servicio y dividida por los coeficientes de la tabla a continuación. Estos coeficientes simulan la potencia transmisible por una cadena múltiple. Ej una cadena doble transmite 1,7 veces mas potencia que una cadena simple.

Numero de hileras de cadenas múltiples	factor de corrección de cadena simple a múltiple
2	1,7
3	2,5
4	3
5	3,5
6	4
8	4,5

#### Ejemplo practico

Motor AC 5,5 kw 300 rpm, aplicación de impacto medio. Factor de servicio de tabla=1,3

Potencia afectada del factor de servicio=  $5,5 \text{ kW} \times 1,3 = 7,15 \text{ kW}$

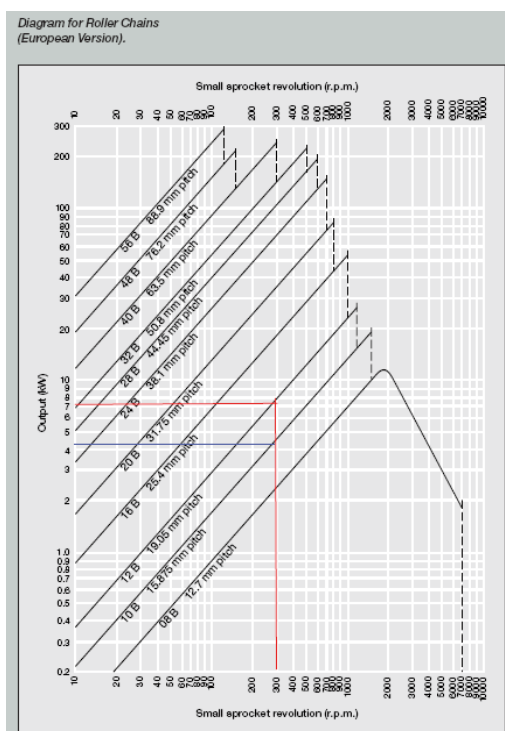
Todas las cadenas podrían ser idóneas para esta velocidad (ver diagrama velocidad)

Analizando las curvas de potencia transmisible vemos que la 12B-1 o una 16B-1 podrían gestionar la potencia de 7,15 kW a 300 rpm. (lineas rojas)

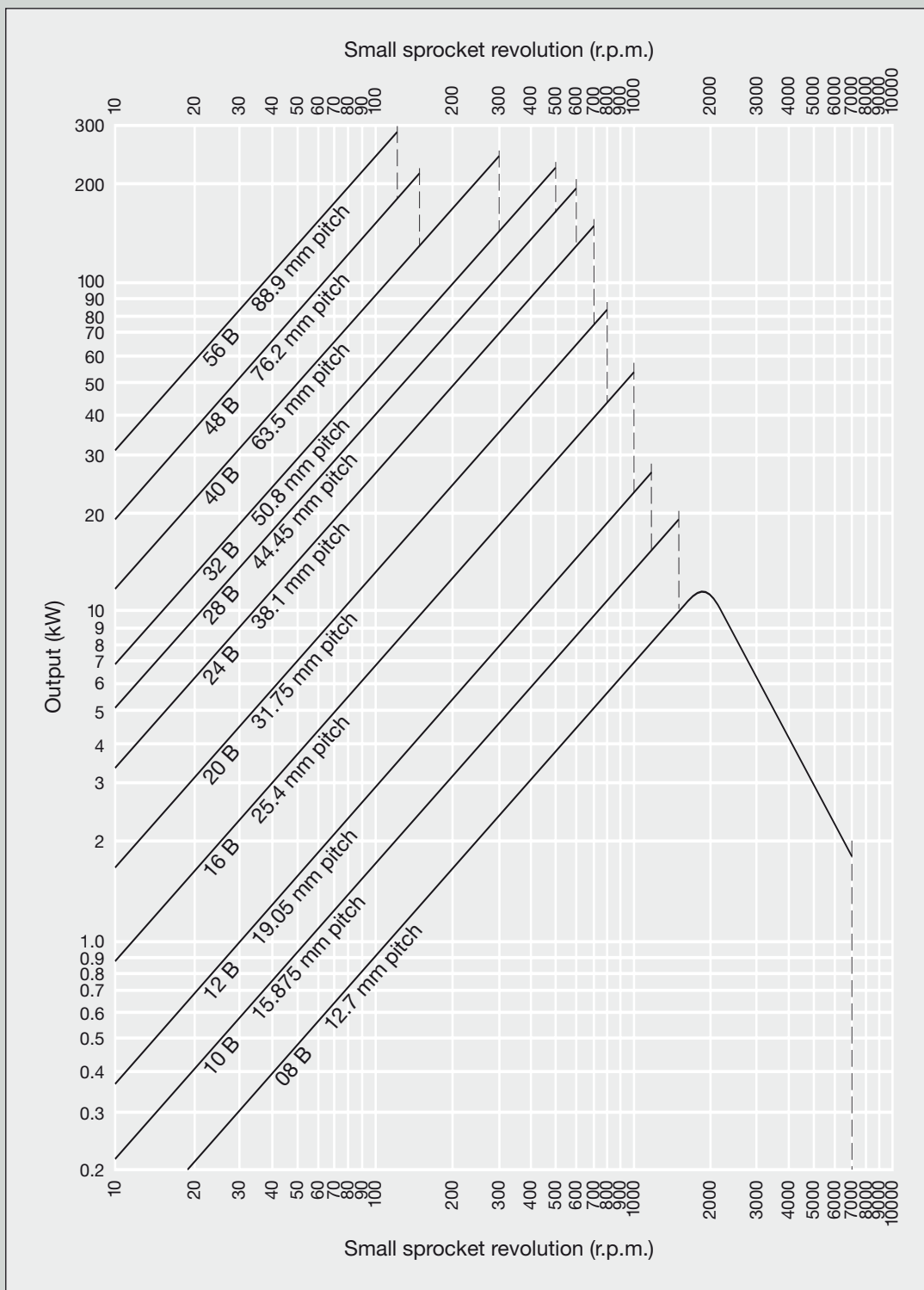
Para analizar una cadena doble por ejemplo realizo la siguiente simulación:

Potencia a transmitir por una cadena doble (considerando que el diagrama es para cadenas simples) =  $7,15 / 1,7 = 4,2 \text{ kW}$ . Esto significa que una cadena simple que pueda transmitir a 300 rpm 4,2 kW podrá transmitir 7,15 kW en su versión de cadena doble.

Del diagrama de potencia en función de las velocidades obtengo que la potencia de 4,2 kW podría ser gestionada por una 10B-1 y por lo tanto la 10B-2 podría trabajar con 7,15 kW. (línea azul)

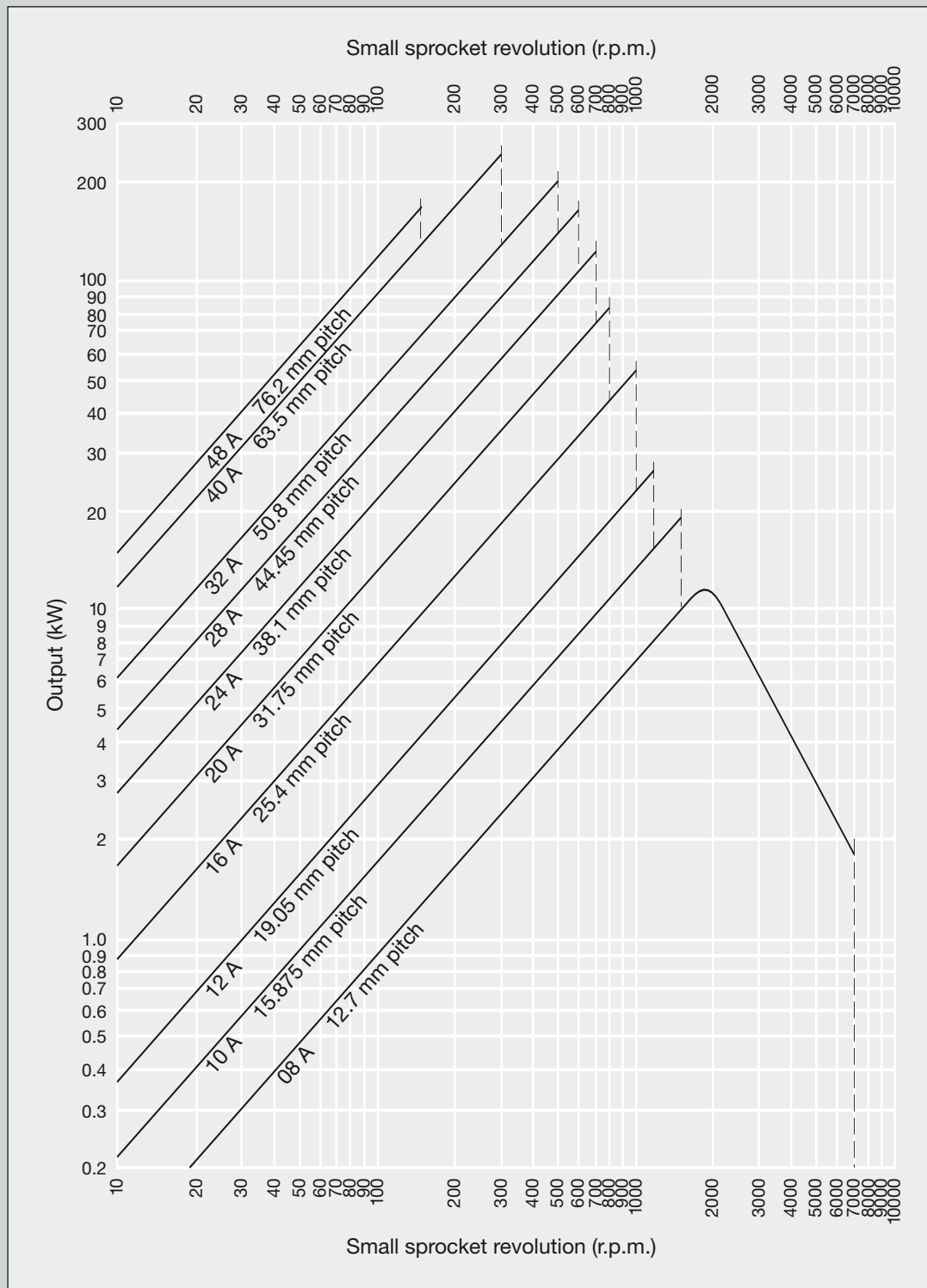


**Diagram for Roller Chains  
(European Version).**



**Fig. 12:**  
**Performance diagram**  
**for roller chains**  
**(European version).**

**Diagram for Roller Chains  
(American Version).**



**Fig. 13:**  
**Performance diagram**  
**for roller chains**  
**(American version).**

d) realizamos la verificación utilizando las tablas de las distintas cadenas a continuación.

En estas tablas se indica, no solo la potencia transmisible en función de la velocidad, si no también, el número de dientes necesario para satisfacer dichos requisitos y el tipo de lubricación requerida por las velocidades lineales de la cadena.

En el ejemplo anterior y utilizando los diagramas en páginas a continuación vemos que la 12B-1 necesita aproximadamente 28-29 dientes para transmitir los 7,15 kW, mientras que la 16B-1 necesita simplemente 13 dientes para la misma potencia.

5.4 Transmittable output's (kW)																															
for Rex-High-Capacity-Roller Chains 16 B - 1																															
25.4 mm pitch, European version																															
DIN 8187																															
Number of teeth	Reference Ø mm	Small sprocket revolution																													
		25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000										
		Hand lubrication										Oil bath lubrication										Forced feed lubrication									
13	106.14	0.97	1.49	3.66	6.06	9.00	11.67	14.25	19.33	24.25	21.00	16.00	12.67	10.42	8.67	7.42	6.43	5.65	5.01	4.48	-										
14	114.10	1.04	1.95	3.63	6.78	9.75	12.67	15.50	20.92	26.25	23.50	17.83	14.17	11.58	9.75	8.30	7.19	6.21	5.60	5.01	-										
15	122.20	1.12	2.10	3.92	7.31	10.50	13.67	16.67	22.58	28.33	26.00	19.83	15.75	12.89	10.75	9.17	7.97	7.00	6.21	5.05	-										
16	130.20	1.21	2.25	4.20	7.83	11.25	14.58	17.83	24.17	30.33	28.67	21.83	17.33	14.17	11.82	10.17	8.75	7.71	6.94	-	-										
17	138.20	1.29	2.40	4.48	8.33	12.08	15.58	19.08	25.83	32.42	31.23	23.83	19.52	15.50	13.00	11.08	9.58	8.42	7.47	-	-										
18	146.30	1.37	2.56	4.77	8.92	12.89	16.58	20.33	27.50	34.42	33.17	25.00	20.87	16.92	14.17	12.06	10.58	9.17	8.16	-	-										
19	154.30	1.45	2.71	5.06	9.42	13.58	17.58	21.50	29.17	36.50	35.00	26.25	22.42	18.23	15.23	13.08	11.23	10.00	8.89	-	-										
20	162.40	1.53	2.87	5.35	10.00	14.23	18.58	22.75	30.83	38.67	37.00	27.50	23.47	19.23	16.19	13.99	12.16	10.75	9.79	-	-										
21	170.40	1.62	3.02	5.63	10.50	15.17	19.67	24.00	32.50	40.75	39.00	28.50	24.33	20.17	16.92	14.58	12.55	11.25	10.58	-	-										
22	178.50	1.70	3.17	5.92	11.08	15.92	20.67	25.25	34.17	42.83	40.25	29.50	25.26	21.23	17.99	15.39	13.17	11.63	10.47	12.42	-										
23	186.50	1.78	3.29	6.22	11.58	16.67	21.67	26.42	35.83	44.83	42.25	30.50	25.93	21.42	18.00	15.50	13.57	12.25	11.25	-	-										
24	194.60	1.87	3.49	6.51	12.17	17.50	22.67	27.75	37.50	47.00	44.25	31.50	26.67	22.17	18.60	16.17	14.17	12.67	11.47	-	-										
25	202.70	1.95	3.65	6.81	12.67	18.25	23.67	29.00	39.17	49.17	46.08	32.50	27.67	23.17	19.33	16.17	14.17	12.67	11.47	-	-										
26	210.80	2.03	3.85	7.11	13.17	19.00	24.67	30.17	40.33	50.33	46.08	33.50	28.67	23.83	19.75	16.50	14.50	12.67	11.47	-	-										
27	218.90	2.11	4.05	7.39	13.67	19.75	25.67	31.33	41.50	51.50	47.25	34.50	29.83	24.50	20.17	17.00	15.00	13.67	12.25	-	-										
28	227.00	2.19	4.25	7.67	14.17	20.50	26.67	32.50	42.67	52.67	48.25	35.50	30.83	25.50	20.67	17.50	15.50	14.00	12.83	-	-										
29	235.10	2.27	4.45	7.95	14.67	21.25	27.67	33.67	43.83	53.83	49.25	36.50	31.67	26.50	21.17	18.00	16.00	14.50	13.17	-	-										
30	243.20	2.35	4.65	8.23	15.17	22.00	28.67	34.83	45.00	55.00	50.25	37.50	32.67	27.50	21.83	18.50	16.50	15.00	14.17	-	-										
32	259.10	2.55	4.76	9.02	16.58	23.83	30.82	37.75	51.17	64.17	59.50	39.50	34.67	29.17	23.50	20.50	18.50	17.00	16.00	-	-										
35	293.40	2.81	5.24	9.75	18.25	26.23	34.06	41.67	56.42	70.67	65.75	41.50	37.67	30.83	24.50	21.50	19.50	18.00	17.00	-	-										
40	323.70	3.24	6.06	11.33	21.08	30.23	39.33	48.08	65.09	81.67	76.00	45.50	41.67	34.83	27.50	24.50	22.50	21.00	20.00	-	-										

5.3 Transmittable output's (kW)

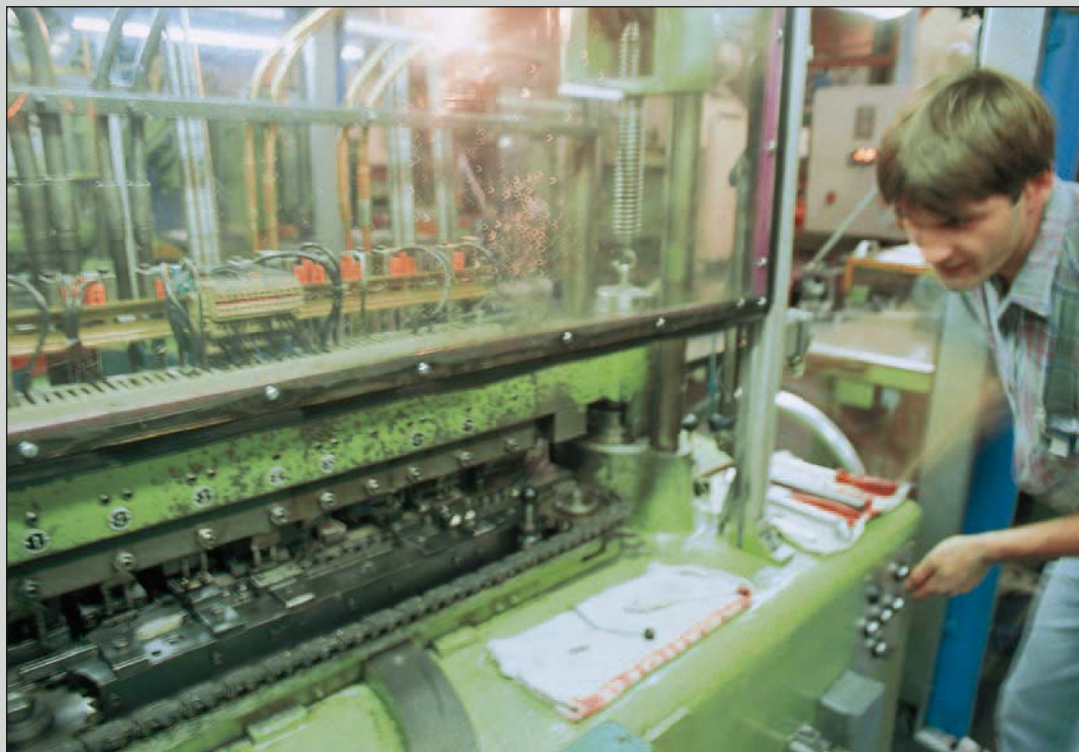
for Rex-High-Capacity-Roller Chains 12 B - 1

19.05 mm pitch, European version

DIN 8187

Number of teeth	Reference Ø mm	Small sprocket revolution																																											
		50	100	200	500	700	900	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	3800	4000	4600																								
		Hand lubrication										Oil bath lubrication										Forced feed lubrication																							
13	79.00	0.62	1.15	2.15	4.89	6.57	8.33	10.17	8.07	6.58	5.56	4.72	4.09	3.59	3.18	2.85	2.57	2.04	1.80	1.67	-	8.33	10.17	8.07	6.58	5.56	4.72	4.09	3.59	3.18	2.85	2.57	2.04	1.80	1.67	-	4.09	3.59	3.18	2.85	2.57	2.04	1.80	1.67	-
14	85.00	0.67	1.25	2.32	5.30	7.20	9.08	11.42	9.08	7.40	6.21	5.27	4.57	4.02	3.56	3.18	2.87	2.28	2.01	1.87	-	9.08	11.42	9.08	7.40	6.21	5.27	4.57	4.02	3.56	3.18	2.87	2.28	2.01	1.87	-	4.57	4.02	3.56	3.18	2.87	2.28	2.01	1.87	-
15	91.00	0.72	1.33	2.51	5.71	7.73	9.75	12.58	10.00	8.20	6.87	5.85	5.07	4.45	3.95	3.53	3.18	2.52	2.22	2.07	-	9.75	12.58	10.00	8.20	6.87	5.85	5.07	4.45	3.95	3.53	3.18	2.52	2.22	2.07	-	5.07	4.45	3.95	3.53	3.18	2.52	2.22	2.07	-
16	97.00	0.77	1.44	2.68	6.11	8.29	10.50	13.56	11.09	9.00	7.60	6.44	5.58	4.91	4.36	3.99	3.50	2.77	2.45	2.28	-	10.50	13.56	11.09	9.00	7.60	6.44	5.58	4.91	4.36	3.99	3.50	2.77	2.45	2.28	-	4.36	3.99	3.50	2.77	2.45	2.28	-		
17	103.70	0.82	1.53	2.88	6.54	8.92	11.17	14.50	12.17	9.92	8.39	7.05	6.12	5.37	4.72	4.27	3.90	3.05	2.68	2.49	-	11.17	14.50	12.17	9.92	8.39	7.05	6.12	5.37	4.72	4.27	3.90	3.05	2.68	2.49	-	4.27	3.90	3.05	2.68	2.49	-			
18	109.70	0.86	1.63	3.05	6.95	9.62	11.92	15.33	12.25	10.75	9.08	7.67	6.67	5.85	5.19	4.64	4.18	3.22	2.99	2.72	-	11.92	15.33	12.25	10.75	9.08	7.67	6.67	5.85	5.19	4.64	4.18	3.22	2.99	2.72	-	5.19	4.64	4.18	3.22	2.99	2.72	-		
19	115.70	0.92	1.73	3.24	7.40	10.00	12.58	16.25	14.23	11.67	9.89	8.33	7.27	6.34	5.63	5.04	4.53	3.60	3.17	2.94	-	12.58	16.25	14.23	11.67	9.89	8.33	7.27	6.34	5.63	5.04	4.53	3.60	3.17	2.94	-	4.53	3.60	3.17	2.94	-				
20	121.80	0.96	1.89	3.42	7.79	10.58	13.23	17.17	15.50	12.58	10.98	9.00	7.79	6.87	6.06	5.44	4.89	3.88	3.43	-	-	13.23	17.17	15.50	12.58	10.98	9.00	7.79	6.87	6.06	5.44	4.89	3.88	3.43	-	5.44	4.89	3.88	3.43	-					
21	127.80	1.04	1.92	3.62	8.20	11.17	14.00	18.17	16.58	13.58	12.52	10.67	8.82	7.80	6.94	6.16	5.56	4.48	3.68	-	-	14.00	18.17	16.58	13.58	12.52	10.67	8.82	7.80	6.94	6.16	5.56	4.48	3.68	-	5.56	4.48	3.68	-						
22	133.90	1.09	2.02	3.79	8.67	11.75	14.75	19.17	17.45	14.58	12.45	10.62	9.00	7.99	7.00	6.28	5.65	4.68	3.86	-	-	14.75	19.17	17.45	14.58	12.45	10.62	9.00	7.99	7.00	6.28	5.65	4.68	3.86	-	5.65	4.68	3.86	-						
23	139.90	1.14	2.12	3.98	9.08	12.25	15.50	20.00	19.08	15.58	13.08	11.17	9.58	8.50	7.54	6.72	6.04	4.79	-	-	-	15.50	20.00	19.08	15.58	13.08	11.17	9.58	8.50	7.54	6.72	6.04	4.79	-	6.04	4.79	-	-							
24	145.90	1.20	2.22	4.17	9.50	12.92	16.25	20.92	20.25	16.42	13.92	11.83	10.25	9.00	8.00	7.13	6.43	5.11	-	-	-	16.25	20.92	20.25	16.42	13.92	11.83	10.25	9.00	8.00	7.13	6.43	5.11	-	7.13	6.43	5.11	-							
25	152.00	1.25	2.32	4.36	9.92	13.50	16.92	21.92	21.58	17.58	14.93	12.92	10.98	9.58	8.58	7.60	6.87	5.43	-	-	-	16.92	21.92	21.58	17.58	14.93	12.92	10.98	9.58	8.58	7.60	6.87	5.43	-	7.60	6.87	5.43	-							
26	157.10	1.42	2.60	4.92	11.25	15.25	19.17	24.75	25.58	20.82	17.98	14.92	12.92	11.23	10.08	9.00	8.13	6.44	-	-	-	15.25	19.17	24.75	25.58	20.82	17.98	14.92	12.92	11.23	10.08	9.00	8.13	6.44	-	8.13	6.44	-							
28	182.30	1.52	2.83	5.29	12.08	16.42	20.58	26.67	28.42	23.17	19.50	16.50	14.33	12.58	11.10	10.00	9.00	-	-	-	-	16.42	20.58	26.67	28.42	23.17	19.50	16.50	14.33	12.58	11.10	10.00	9.00	-	9.00	-	-								
32	194.40	1.63	3.04	5.68	12.92	17.50	22.08	28.58	31.25	25.50	21.50	18.17	15.58	13.89	12.33	11.00	9.82	-	-	-	-	17.50	22.08	28.58	31.25	25.50	21.50	18.17	15.58	13.89	12.33	11.00	9.82	-	9.82	-	-								
35	212.50	1.90	3.35	6.27	14.25	19.23	24.39	31.50	35.83	29.17	24.58	20.83	18.08	15.93	14.28	12.58	11.23	-	-	-	-	19.23	24.39	31.50	35.83	29.17	24.58	20.83	18.08	15.93	14.28	12.58	11.23	-	11.23	-	-								
40	242.80	2.06	3.88	7.27	16.50	22.28	28.08	36.50	41.83	35.08	30.00	25.50	22.08	19.42	17.17	15.42	-	-	-	-	-	22.28	28.08	36.50	41.83	35.08	30.00	25.50	22.08	19.42	17.17	15.42	-	15.42	-	-									





**5.1 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 08 B – 1  
12.7 mm pitch, European version**

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		50	200	400	600	900	1200	1800	2400	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	9000
		Hand lubrication		Drip lubrication				Oil bath lubrication				Forced feed lubrication									
13	53.10	0.23	0.80	1.50	2.16	3.11	4.02	4.99	3.24	2.32	1.84	1.51	1.27	1.07	0.93	0.82	0.72	0.65	0.58	0.53	—
14	57.10	0.25	0.87	1.62	2.33	3.37	4.36	5.58	3.62	2.59	2.06	1.68	1.41	1.21	1.04	0.92	0.82	0.72	0.66	0.59	—
15	61.10	0.27	0.93	1.75	2.52	3.62	4.70	6.19	4.02	2.88	2.28	1.87	1.57	1.33	1.16	1.02	0.90	0.81	0.72	—	—
16	65.10	0.29	1.00	1.87	2.70	3.88	5.03	6.82	4.42	3.17	2.52	2.06	1.72	1.47	1.27	1.12	0.99	0.89	0.80	—	—
17	69.10	0.31	1.07	2.00	2.88	4.15	5.37	7.47	4.85	3.47	2.76	2.26	1.89	1.62	1.40	1.23	1.09	0.97	0.87	—	—
18	73.10	0.32	1.14	2.12	3.07	4.42	5.72	8.13	5.28	3.78	3.00	2.46	2.06	1.76	1.52	1.33	1.18	1.06	0.96	—	—
19	77.20	0.35	1.21	2.26	3.25	4.68	6.06	8.75	5.73	4.10	3.26	2.67	2.23	1.91	1.65	1.45	1.28	1.15	1.04	—	—
20	81.20	0.37	1.27	2.38	3.43	4.95	6.41	9.25	6.19	4.42	3.52	2.88	2.41	2.06	1.78	1.57	1.39	1.24	1.12	—	—
21	85.20	0.38	1.35	2.52	3.62	5.22	6.76	9.75	6.66	4.77	3.78	3.09	2.59	2.22	1.92	1.68	1.49	1.33	1.21	—	—
22	89.20	0.41	1.42	2.64	3.81	5.48	7.10	10.25	7.14	5.11	4.06	3.32	2.78	2.37	2.06	1.81	1.60	1.43	—	—	—
23	93.30	0.42	1.48	2.77	3.99	5.75	7.45	10.75	7.63	5.46	4.33	3.55	2.97	2.54	2.20	1.93	1.72	1.53	—	—	—
24	97.30	0.45	1.56	2.90	4.18	6.02	7.80	11.25	8.13	5.82	4.62	3.78	3.17	2.71	2.34	2.06	1.82	1.63	—	—	—
25	101.30	0.47	1.62	3.03	4.37	6.29	8.15	11.75	8.67	6.19	4.91	4.02	3.37	2.88	2.49	2.19	1.94	—	—	—	—
28	113.40	0.52	1.83	3.42	4.94	7.12	9.25	13.25	10.25	7.33	5.82	4.77	3.99	3.41	2.96	2.59	2.30	—	—	—	—
30	121.50	0.57	1.98	3.69	5.32	7.67	9.92	14.33	11.33	8.13	6.46	5.28	4.42	3.78	3.27	2.88	—	—	—	—	—
32	129.60	0.61	2.12	3.96	5.71	8.22	10.67	15.33	12.50	9.00	7.12	5.82	4.88	4.17	3.61	3.17	—	—	—	—	—
35	141.70	0.67	2.33	4.37	6.28	9.08	11.75	16.92	14.33	10.25	8.13	6.66	5.58	4.77	4.13	—	—	—	—	—	—
40	161.90	0.77	2.70	5.04	7.26	10.42	13.58	19.50	17.50	12.50	9.92	8.13	6.82	5.82	—	—	—	—	—	—	—

## 5.2 Transmittable output's (kW) for Rex-High-Capacity-Roller Chains 10 B – 1 15.875 mm pitch, European version

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		50	100	300	500	900	1200	1500	1800	2100	2400	2700	3000	3300	3500	4000	4500	5000	5400	5800	6200
		Hand lubrication		Drip lubrication		Oil bath lubrication						Forced feed lubrication									
13	66.30	0.42	0.80	2.13	3.38	5.75	7.46	7.58	5.67	4.49	3.68	3.08	2.63	2.28	2.10	1.71	1.43	1.23	1.08	0.98	–
14	71.30	0.46	0.87	2.31	3.64	6.22	8.08	8.50	6.34	5.02	4.12	3.45	2.94	2.56	2.34	1.91	1.60	1.37	1.21	–	–
15	76.40	0.50	0.92	2.50	3.94	6.71	8.75	9.42	7.03	5.56	4.56	3.82	3.27	2.83	2.60	2.12	1.77	1.52	1.34	–	–
16	81.40	0.53	1.00	2.67	4.22	7.18	9.33	10.42	7.75	6.12	5.03	4.22	3.59	3.12	2.87	2.33	1.96	1.67	1.49	–	–
17	86.40	0.57	1.06	2.85	4.50	7.67	9.92	11.33	8.50	6.71	5.50	4.62	3.95	3.42	3.13	2.55	2.14	1.83	1.62	–	–
18	91.40	0.61	1.13	3.03	4.79	8.17	10.58	12.33	9.25	7.31	6.00	5.03	4.29	3.72	3.41	2.78	2.33	2.00	–	–	–
19	96.50	0.64	1.19	3.22	5.08	8.67	11.25	13.42	10.08	7.92	6.50	5.45	4.66	4.04	3.71	3.02	2.53	2.17	–	–	–
20	101.50	0.68	1.27	3.40	5.37	9.17	11.92	14.42	10.83	8.58	7.03	5.88	5.03	4.37	4.00	3.26	2.73	2.34	–	–	–
21	106.50	0.72	1.34	3.58	5.67	9.67	12.50	15.33	11.67	9.17	7.56	6.36	5.40	4.69	4.31	3.52	2.93	2.52	–	–	–
22	111.60	0.75	1.40	3.78	5.96	10.17	13.17	16.08	12.50	9.92	8.08	6.79	5.81	5.04	4.61	3.77	3.15	2.71	–	–	–
23	116.60	0.79	1.47	3.96	6.23	11.00	13.75	16.83	13.42	10.50	8.67	7.27	6.20	5.37	4.93	4.02	3.38	–	–	–	–
24	121.60	0.82	1.54	4.15	6.54	11.17	14.50	17.67	14.25	11.25	9.25	7.74	6.59	5.73	5.25	4.29	3.60	–	–	–	–
25	126.70	0.87	1.62	4.33	6.83	11.67	15.17	18.42	15.17	12.00	9.83	8.25	7.03	6.10	5.58	4.57	3.83	–	–	–	–
28	141.80	0.95	1.82	4.89	7.72	13.17	17.08	20.83	18.00	14.17	11.67	9.75	8.25	7.23	6.62	5.40	–	–	–	–	–
30	151.90	1.05	1.92	5.27	8.31	14.17	18.33	22.50	19.83	15.75	12.92	10.83	9.25	8.00	7.33	5.99	–	–	–	–	–
32	162.00	1.12	2.11	5.66	8.92	15.17	19.75	24.08	21.92	17.33	14.25	11.92	10.25	8.83	8.08	6.60	–	–	–	–	–
35	177.10	1.24	2.32	6.22	9.83	16.75	21.67	26.58	25.08	19.83	16.25	13.67	11.67	10.17	9.25	7.57	–	–	–	–	–
40	202.30	1.43	2.67	7.19	11.33	19.50	24.67	30.58	30.58	24.25	19.83	16.67	14.25	12.33	11.33	–	–	–	–	–	–

## 5.3 Transmittable output's (kW) for Rex-High-Capacity-Roller Chains 12 B – 1 19.05 mm pitch, European version

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		50	100	200	500	700	900	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	3800	4000	4600
		Hand lubrication		Drip lubrication		Oil bath lubrication						Forced feed lubrication									
13	79.60	0.62	1.15	2.15	4.89	6.57	8.33	10.17	8.07	6.58	5.56	4.72	4.09	3.59	3.18	2.85	2.57	2.04	1.80	1.67	–
14	85.60	0.67	1.25	2.32	5.30	7.20	9.08	11.42	9.08	7.40	6.21	5.27	4.57	4.02	3.56	3.18	2.87	2.28	2.01	1.87	–
15	91.60	0.72	1.33	2.51	5.71	7.73	9.75	12.58	10.00	8.20	6.87	5.85	5.07	4.45	3.95	3.53	3.18	2.52	2.22	2.07	–
16	97.60	0.77	1.44	2.68	6.12	8.33	10.50	13.50	11.08	9.00	7.60	6.44	5.58	4.91	4.36	3.89	3.50	2.77	2.45	2.28	–
17	103.70	0.82	1.53	2.88	6.54	8.92	11.17	14.50	12.17	9.92	8.33	7.06	6.12	5.37	4.77	4.27	3.90	3.05	2.68	2.49	–
18	109.70	0.88	1.63	3.05	6.93	9.42	11.92	15.33	13.25	10.75	9.08	7.67	6.67	5.85	5.19	4.64	4.18	3.32	2.93	2.72	–
19	115.70	0.93	1.73	3.24	7.40	10.00	12.58	16.25	14.33	11.67	9.83	8.33	7.27	6.34	5.63	5.04	4.53	3.60	3.17	2.94	–
20	121.80	0.98	1.83	3.42	7.79	10.58	13.33	17.17	15.50	12.58	10.58	9.00	7.79	6.87	6.08	5.44	4.89	3.88	3.43	–	–
21	127.80	1.04	1.92	3.62	8.20	11.17	14.00	18.17	16.58	13.50	11.42	9.67	8.42	7.40	6.55	5.86	5.27	4.18	3.69	–	–
22	133.90	1.09	2.02	3.79	8.67	11.75	14.75	19.08	17.83	14.58	12.25	10.42	9.00	7.93	7.00	6.28	5.65	4.48	3.95	–	–
23	139.90	1.14	2.12	3.98	9.08	12.25	15.50	20.00	19.08	15.58	13.08	11.17	9.58	8.50	7.54	6.72	6.04	4.79	–	–	–
24	145.90	1.20	2.22	4.17	9.50	12.92	16.25	20.92	20.25	16.42	13.92	11.83	10.25	9.00	8.00	7.13	6.43	5.11	–	–	–
25	152.00	1.25	2.32	4.36	9.92	13.50	16.92	21.92	21.58	17.58	14.83	12.58	10.92	9.58	8.58	7.60	6.87	5.43	–	–	–
28	170.10	1.42	2.63	4.92	11.25	15.25	19.17	24.75	25.58	20.83	17.58	14.92	12.92	11.33	10.08	9.00	8.13	6.44	–	–	–
30	182.30	1.52	2.83	5.29	12.08	16.42	20.58	26.67	28.42	23.17	19.50	16.50	14.33	12.58	11.17	10.00	9.00	–	–	–	–
32	194.40	1.63	3.04	5.68	12.92	17.50	22.08	28.58	31.25	25.50	21.50	18.17	15.83	13.83	12.33	11.00	9.92	–	–	–	–
35	212.50	1.80	3.35	6.27	14.25	19.33	24.33	31.50	35.83	29.17	24.58	20.83	18.08	15.83	14.08	12.58	11.33	–	–	–	–
40	242.80	2.08	3.88	7.27	16.50	22.33	28.08	36.50	41.83	35.58	30.00	25.50	22.00	19.42	17.17	15.42	–	–	–	–	–



#### 5.4 Transmittable output's (kW) for Rex-High-Capacity-Roller Chains 16 B – 1 25.4 mm pitch, European version

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
		Hand lubrication		Drip lubrication				Oil bath lubrication				Forced feed lubrication									
13	106.10	0.97	1.80	3.36	6.26	9.00	11.67	14.25	19.33	24.25	21.00	16.00	12.67	10.42	8.67	7.42	6.43	5.65	5.01	4.48	–
14	114.10	1.04	1.95	3.63	6.78	9.75	12.67	15.50	20.92	26.25	23.50	17.83	14.17	11.58	9.75	8.30	7.19	6.31	5.60	5.01	–
15	122.20	1.12	2.10	3.92	7.31	10.50	13.67	16.67	22.58	28.33	26.00	19.83	15.75	12.83	10.75	9.17	7.97	7.00	6.21	0.35	–
16	130.20	1.21	2.25	4.20	7.83	11.25	14.58	17.83	24.17	30.33	28.67	21.83	17.33	14.17	11.83	10.17	8.75	7.71	6.84	–	–
17	138.20	1.29	2.40	4.48	8.33	12.08	15.58	19.08	25.83	32.42	31.33	23.83	18.92	15.50	13.00	11.08	9.58	8.42	7.47	–	–
18	146.30	1.37	2.56	4.77	8.92	12.83	16.58	20.33	27.50	34.42	34.17	26.00	20.67	16.92	14.17	12.08	10.50	9.17	8.16	–	–
19	154.30	1.45	2.71	5.06	9.42	13.58	17.58	21.50	29.17	36.50	37.08	28.25	22.42	18.33	15.33	13.08	11.33	10.00	8.83	–	–
20	162.40	1.53	2.87	5.35	10.00	14.33	18.58	22.75	30.83	38.67	40.08	30.50	24.17	19.83	16.58	14.17	12.25	10.75	0.79	–	–
21	170.40	1.62	3.02	5.63	10.50	15.17	19.67	24.00	32.50	40.75	43.08	32.83	26.00	21.33	17.83	15.25	13.25	11.58	–	–	–
22	178.50	1.70	3.17	5.92	11.08	15.92	20.67	25.25	34.17	42.83	46.25	35.17	27.92	22.83	19.17	16.33	14.17	12.42	–	–	–
23	186.50	1.78	3.33	6.22	11.58	16.67	21.67	26.42	35.83	44.92	49.33	37.58	29.83	24.42	20.50	17.50	15.17	13.25	–	–	–
24	194.60	1.87	3.49	6.51	12.17	17.50	22.67	27.75	37.50	47.00	51.67	40.08	31.75	26.00	21.83	18.58	16.17	14.17	–	–	–
25	202.70	1.95	3.65	6.81	12.67	18.25	23.67	29.00	39.17	49.17	54.08	42.58	33.83	27.67	23.17	19.83	17.17	6.95	–	–	–
28	226.80	2.21	4.12	7.69	14.33	20.67	26.75	32.75	44.33	55.50	61.08	50.50	40.08	32.83	27.50	23.50	20.33	–	–	–	–
30	243.00	2.37	4.44	8.28	15.42	22.25	28.83	35.25	47.75	59.83	65.75	56.00	44.42	36.33	30.50	26.00	20.42	–	–	–	–
32	259.10	2.55	4.76	8.92	16.58	23.83	30.92	37.75	51.17	64.17	70.58	61.67	48.92	40.08	33.58	28.67	–	–	–	–	–
35	283.40	2.81	5.24	9.75	18.25	26.33	34.08	41.67	56.42	70.67	77.75	70.58	56.00	45.83	38.42	32.83	–	–	–	–	–
40	323.70	3.24	6.06	11.33	21.08	30.33	39.33	48.08	65.08	81.67	90.00	85.83	68.42	56.00	46.92	–	–	–	–	–	–

#### 5.5 Transmittable output's (kW) for Rex-High-Capacity-Roller Chains 20 B – 1 31.75 mm pitch, European version

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																				
		10	25	50	100	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2200	
		Hand lubrication			Drip lubrication		Oil bath lubrication						Forced feed lubrication									
13	132.70	0.81	1.85	3.44	6.43	12.00	17.25	22.42	27.33	32.25	37.08	35.08	29.42	25.08	21.75	19.08	15.17	12.42	10.42	—	—	
14	142.70	0.87	2.00	3.73	6.96	13.00	18.75	24.25	29.67	34.92	40.08	39.17	32.83	28.00	24.33	21.33	16.92	13.83	11.58	—	—	
15	152.70	0.94	2.16	4.02	7.50	14.00	20.17	26.17	31.92	37.67	43.25	43.50	36.42	31.08	27.00	23.67	18.75	15.42	12.92	—	—	
16	162.70	1.02	2.31	4.31	8.04	15.00	21.58	28.00	34.25	40.33	46.33	47.92	40.08	34.25	29.67	26.08	20.67	16.92	14.17	—	—	
17	172.80	1.08	2.47	4.60	8.58	16.00	23.08	29.92	36.58	43.08	49.50	52.42	43.92	37.50	32.50	28.50	22.67	18.50	15.17	—	—	
18	182.80	1.15	2.62	4.89	9.17	17.00	24.58	31.83	38.92	45.83	52.67	57.17	47.92	40.92	35.42	31.08	24.67	20.25	13.83	—	—	
19	192.90	1.22	2.78	5.19	9.67	18.08	26.00	33.75	41.25	48.58	55.83	62.00	51.92	44.33	38.42	33.75	26.75	21.92	5.58	—	—	
20	202.90	1.29	2.94	5.48	10.25	19.08	27.50	35.67	43.58	51.33	59.00	66.50	56.08	47.92	41.50	36.42	28.92	23.67	—	—	—	
21	213.00	1.36	3.10	5.78	10.75	20.17	29.00	37.58	45.92	54.08	62.17	70.08	60.33	51.50	44.67	39.17	31.08	25.42	—	—	—	
22	223.10	1.42	3.26	6.08	11.33	21.17	30.50	39.50	48.33	56.92	65.42	73.75	64.75	55.25	47.92	42.00	33.33	27.33	—	—	—	
23	233.20	1.50	3.42	6.38	11.92	22.17	32.00	41.42	50.67	59.75	68.58	77.33	69.17	59.08	51.17	44.92	35.67	29.17	—	—	—	
24	243.20	1.57	3.58	6.68	12.50	23.25	33.50	43.42	53.08	62.50	71.83	81.00	73.67	62.92	54.58	47.83	38.00	31.08	—	—	—	
25	253.30	1.64	3.74	6.97	13.00	24.33	35.00	45.33	55.42	65.33	75.08	85.00	78.42	66.92	58.00	50.92	40.42	30.25	—	—	—	
28	283.60	1.85	4.22	7.89	14.75	27.50	39.58	51.25	62.67	73.83	85.00	95.83	92.50	79.33	68.75	60.33	47.92	4.12	—	—	—	
30	303.80	2.00	4.56	8.50	15.83	29.58	42.67	55.25	67.50	79.58	91.67	103.33	103.33	88.33	76.25	66.92	53.08	—	—	—	—	
32	323.90	2.14	4.88	9.08	17.00	31.75	45.67	59.25	72.42	85.00	98.33	110.83	113.33	96.67	84.17	73.75	58.50	—	—	—	—	
35	354.20	2.36	5.38	10.00	18.75	34.92	50.33	65.25	79.75	94.17	108.33	121.67	130.00	110.83	95.83	84.17	40.33	—	—	—	—	
40	404.70	2.72	6.22	11.58	21.67	40.33	58.17	75.33	92.50	108.33	125.00	140.83	156.67	135.83	117.50	103.33	—	—	—	—	—	

**5.6 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 24 B – 1  
38.1 mm pitch, European version**

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
		Hand lubrication		Drip lubrication			Oil bath lubrication					Forced feed lubrication									
13	159.20	1.64	3.74	6.97	13.00	18.67	24.33	35.00	45.42	55.42	65.42	59.42	47.83	40.67	34.83	30.08	26.50	23.50	21.00	18.92	—
14	171.20	1.77	4.05	7.54	14.08	20.33	26.33	37.92	49.17	60.00	70.75	66.42	54.33	45.50	38.92	34.58	29.67	26.17	23.50	12.58	—
15	183.30	1.91	4.36	8.14	15.25	21.92	28.33	40.83	52.83	64.58	76.08	69.50	60.33	50.50	43.17	37.42	32.83	29.17	26.00	4.50	—
16	195.30	2.05	4.67	8.75	16.33	23.42	30.42	43.83	56.67	69.42	81.67	81.08	66.33	55.67	47.50	41.17	36.17	32.00	28.75	—	—
17	207.30	2.19	4.99	9.33	17.42	25.00	32.42	46.67	60.58	74.08	87.50	89.17	72.67	60.83	52.00	45.17	39.58	35.17	31.42	—	—
18	219.40	2.33	5.32	9.92	18.50	26.58	34.50	49.17	64.33	78.58	92.50	96.67	79.17	66.42	56.67	49.17	43.17	38.33	28.58	—	—
19	231.50	2.47	5.62	10.50	19.58	28.25	36.50	52.75	68.25	83.33	98.33	105.00	85.83	72.08	61.42	53.33	46.67	41.50	20.75	—	—
20	243.50	2.62	5.96	11.08	20.67	29.83	38.67	55.67	72.17	88.33	104.17	113.33	92.50	77.75	66.33	57.50	50.50	44.83	11.08	—	—
21	255.60	2.75	6.27	11.67	21.83	31.42	40.75	58.75	76.08	93.33	110.00	121.67	100.00	83.33	71.42	61.83	54.33	48.25	—	—	—
22	267.70	2.89	6.58	12.33	23.00	33.17	42.83	61.67	79.92	97.50	115.00	130.83	106.67	90.00	76.67	49.67	58.17	50.25	—	—	—
23	279.80	3.03	6.92	12.92	24.08	34.67	45.00	64.83	84.17	103.33	120.83	139.17	114.17	95.83	81.83	70.83	62.42	42.33	—	—	—
24	291.90	3.18	7.25	13.50	25.25	36.42	47.17	67.83	88.33	106.67	126.67	145.00	121.67	101.67	87.50	75.50	66.33	32.58	—	—	—
25	304.00	3.32	7.58	14.08	26.42	38.00	49.17	70.83	91.67	112.50	131.67	152.50	130.00	109.17	92.50	80.42	70.42	—	—	—	—
28	340.30	3.75	8.58	16.00	29.83	42.92	55.67	80.00	104.17	126.67	149.17	171.67	154.17	129.17	110.00	95.00	—	—	—	—	—
30	364.50	4.04	9.25	17.17	32.17	46.33	59.92	86.67	111.67	137.50	160.83	185.00	170.00	143.33	121.67	105.83	—	—	—	—	—
32	388.70	4.33	9.92	18.42	34.42	49.58	64.17	92.50	120.00	145.83	171.67	198.33	188.33	156.67	134.17	101.67	—	—	—	—	—
35	425.00	4.77	10.92	20.33	37.92	54.58	70.67	102.50	131.67	160.83	190.00	218.33	215.00	180.00	154.17	68.33	—	—	—	—	—
40	485.60	5.52	12.58	23.50	43.92	63.08	81.67	118.33	153.33	185.83	220.00	251.67	255.00	204.17	103.33	—	—	—	—	—	—

Performance diagrams

**5.7 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 28 B – 1  
44.45 mm pitch, European version**

**DIN 8187**

Number of teeth	Reference ∅ mm	Small sprocket revolution																					
		10	25	50	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000	1100	1200		
		Hand lubrication		Drip lubrication		Oil bath lubrication								Forced feed lubrication									
13	185.80	2.55	5.82	10.92	20.33	29.17	37.83	46.25	54.33	62.50	70.42	78.33	86.67	94.17	85.00	67.08	54.83	46.00	39.33	34.17	—		
14	199.80	2.76	6.32	11.83	22.00	31.58	41.08	50.17	59.00	67.83	76.50	85.00	93.33	100.83	94.17	75.00	61.42	51.42	43.92	38.00	—		
15	213.80	2.97	6.80	12.67	23.75	34.08	44.17	54.00	63.58	73.17	82.50	91.67	100.83	110.00	105.00	83.33	68.25	57.17	48.75	40.00	—		
16	227.90	3.19	7.28	13.58	25.42	36.50	47.42	57.92	68.33	78.33	88.33	98.33	108.33	118.33	115.00	91.67	75.00	62.92	53.75	34.67	—		
17	241.90	3.42	7.77	14.50	27.08	39.00	50.50	61.67	72.92	84.17	94.17	105.00	115.00	125.83	125.83	100.00	82.25	68.75	58.92	29.83	—		
18	256.00	3.62	8.27	15.42	28.83	41.42	53.75	65.67	77.33	89.17	100.00	110.83	122.50	133.33	137.50	109.17	90.00	75.00	64.00	22.75	—		
19	270.10	3.84	8.75	16.00	30.50	44.00	57.08	70.00	81.75	94.17	105.83	118.33	130.00	141.67	149.17	119.17	97.50	81.25	69.42	13.00	—		
20	284.10	4.06	9.25	17.33	32.17	46.33	60.17	73.50	86.67	100.00	112.50	125.00	137.50	150.00	160.83	128.33	105.00	87.50	73.08	5.21	—		
21	298.30	4.28	9.83	18.17	34.00	49.00	63.33	77.50	91.67	105.00	118.33	131.67	145.00	159.17	170.83	138.33	113.33	94.17	69.08	—	—		
22	312.30	4.50	10.33	19.17	35.83	51.50	66.67	81.67	96.67	110.83	125.00	139.17	152.50	165.00	180.00	148.33	120.83	100.83	62.08	—	—		
23	326.40	4.73	10.83	20.08	37.50	54.17	70.00	85.83	100.83	115.00	130.83	145.00	160.00	174.17	188.33	158.33	129.17	108.33	56.00	—	—		
24	340.50	4.95	11.25	21.17	39.33	56.67	73.33	90.00	105.83	120.83	137.50	152.50	166.67	181.67	196.67	168.33	138.33	115.00	46.50	—	—		
25	354.70	5.17	11.83	22.00	41.17	59.17	76.67	94.17	110.00	126.67	143.33	159.17	175.00	198.33	205.83	179.17	147.50	120.00	37.83	—	—		
28	397.00	5.83	13.33	24.92	46.42	66.83	86.67	105.83	125.00	143.33	162.50	180.00	196.67	215.00	233.33	211.67	174.17	98.33	—	—	—		
30	425.30	6.29	14.42	26.83	50.00	72.00	93.33	114.17	134.17	154.17	174.17	194.17	213.33	232.50	251.67	235.00	175.00	82.92	—	—	—		
32	453.50	6.74	15.42	28.75	53.58	77.33	100.00	122.50	144.17	165.00	186.67	207.50	228.33	248.33	268.33	251.67	168.33	64.83	—	—	—		
35	495.90	7.44	17.00	31.58	59.17	85.00	110.00	135.00	159.17	181.67	205.83	229.17	250.83	274.17	295.83	241.67	143.33	28.83	—	—	—		
40	566.60	8.58	19.58	36.67	68.25	98.33	126.67	155.83	183.33	210.83	238.33	264.17	290.00	315.83	310.00	208.33	85.83	—	—	—	—		

### 5.8 Transmittable output's (kW) for Rex-High-Capacity-Roller Chains 32 B – 1 50.8 mm pitch, European version

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		10	25	50	100	150	200	250	300	350	400	500	550	600	700	750	800	850	900	950	1000
		Hand lubric.	Drip lubrication			Oil bath lubrication					Forced feed lubrication										
13	212.30	3.37	7.80	14.42	26.75	38.92	49.83	61.00	71.83	82.67	93.33	113.33	99.17	86.67	68.75	61.92	56.25	33.75	16.50	—	—
14	228.30	3.65	8.33	15.58	29.00	41.67	54.08	66.17	77.75	90.00	100.83	124.17	110.00	95.83	76.83	69.08	62.92	31.33	12.42	—	—
15	244.30	3.92	9.08	16.75	31.25	44.92	58.17	71.25	84.17	96.67	109.17	133.33	122.50	107.50	85.00	76.67	60.83	29.00	8.25	—	—
16	260.40	4.21	9.67	18.00	33.50	48.08	62.50	76.42	90.00	103.33	116.67	143.33	135.00	118.33	93.33	78.75	58.75	26.58	4.58	—	—
17	276.50	4.50	10.25	19.17	35.75	51.42	66.67	81.50	96.67	110.00	125.00	152.50	147.50	129.17	102.50	80.83	56.58	24.17	—	—	—
18	292.60	4.78	11.00	20.50	38.00	54.58	70.83	86.67	101.67	117.50	131.67	162.50	161.67	141.67	111.67	82.83	54.42	21.83	—	—	—
19	308.70	5.07	11.67	21.67	40.33	57.92	75.17	91.67	108.33	125.00	140.83	172.50	174.17	152.50	121.67	85.00	52.25	19.42	—	—	—
20	324.70	5.36	12.25	22.92	42.58	61.25	79.58	97.50	115.00	132.50	148.33	181.67	194.17	165.00	124.17	87.50	49.50	16.50	—	—	—
21	340.90	5.64	12.92	24.08	45.00	64.58	84.17	102.50	120.83	138.33	156.67	191.67	195.83	176.67	117.50	80.00	44.58	14.08	—	—	—
22	357.00	5.94	13.67	25.42	47.33	67.92	88.33	107.50	126.67	145.83	164.17	201.67	198.33	190.00	110.83	73.08	39.58	—	—	—	—
23	373.10	6.23	14.33	26.58	49.58	71.25	92.50	112.50	133.33	153.33	172.50	211.67	200.00	188.33	104.17	65.83	34.67	—	—	—	—
24	389.20	6.53	15.00	27.83	51.83	74.58	97.50	118.33	139.17	160.83	180.00	220.00	201.67	186.67	98.33	58.92	29.67	—	—	—	—
25	405.30	6.82	15.67	29.17	54.25	78.00	100.83	124.17	145.83	167.50	188.33	228.33	203.33	184.17	91.67	51.75	17.42	—	—	—	—
28	453.70	7.71	17.67	32.92	61.25	88.33	115.00	139.17	164.17	190.00	213.33	238.33	207.50	178.33	72.50	30.75	—	—	—	—	—
30	486.00	8.31	19.00	35.42	66.17	95.00	122.50	150.00	176.67	203.33	230.00	247.50	210.83	174.17	59.58	16.50	—	—	—	—	—
32	518.30	8.92	20.50	38.00	70.83	101.67	131.67	154.17	190.00	219.17	246.67	244.17	203.33	164.17	47.67	—	—	—	—	—	—
35	566.70	9.83	22.50	41.92	78.00	111.67	145.83	178.33	209.17	241.67	271.67	240.83	197.50	150.00	27.50	—	—	—	—	—	—
40	647.50	11.42	26.00	48.42	90.00	129.17	167.50	205.00	241.67	279.17	313.33	238.33	183.33	123.33	—	—	—	—	—	—	—

### 5.9 Transmittable output's (kW) for Rex-High-Capacity-Roller Chains 40 B – 1 63.5 mm pitch, European version

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		5	10	15	20	30	40	50	60	80	100	150	200	250	300	350	400	450	550	600	650
		Hand lubrication				Drip lubrication				Oil bath lubrication				Forced feed lubrication							
13	265.40	3.17	5.89	8.50	11.00	15.83	20.58	25.17	29.58	38.33	47.00	67.67	87.50	106.67	125.83	135.00	120.00	100.83	52.50	23.58	–
14	285.40	3.42	6.40	9.17	11.92	17.17	22.33	27.25	32.00	41.67	50.83	73.33	94.17	115.83	136.67	142.50	125.83	105.00	52.33	20.83	–
15	305.40	3.70	6.89	9.92	12.92	18.58	24.00	29.33	34.58	44.83	54.67	78.75	102.50	125.00	150.00	150.83	132.50	109.17	51.67	17.58	–
16	325.50	3.96	7.38	10.67	13.75	19.92	25.75	31.42	37.08	47.92	58.75	85.00	109.17	134.17	157.50	157.50	137.50	113.33	50.42	13.58	–
17	345.60	4.23	7.88	11.42	14.75	21.17	27.50	33.67	39.58	51.25	62.58	90.00	117.50	142.50	165.00	163.33	142.50	115.83	48.33	8.83	–
18	365.70	4.50	8.42	12.08	15.67	22.58	29.17	35.75	42.08	54.58	66.67	96.67	124.17	152.50	170.83	170.00	147.50	118.33	46.00	3.60	–
19	385.80	4.75	8.92	12.75	16.67	23.92	31.00	37.75	44.58	57.75	70.67	101.67	132.50	160.83	178.33	175.83	150.83	120.00	42.75	–	–
20	405.90	5.04	9.42	13.58	17.50	25.33	32.75	40.00	47.08	61.17	74.58	107.50	139.17	170.83	201.67	181.67	155.00	121.67	39.08	–	–
21	426.10	5.32	9.92	14.25	18.50	26.58	34.50	42.17	49.67	64.42	78.75	114.17	146.67	180.00	207.50	186.67	157.50	122.50	34.67	–	–
22	446.20	5.58	10.42	15.00	19.42	28.00	36.33	44.42	52.25	67.67	82.92	119.17	154.17	189.17	215.00	190.83	160.00	122.50	29.83	–	–
23	466.30	5.87	10.92	15.75	20.42	29.42	38.08	46.67	54.92	71.17	86.67	125.00	161.67	197.50	220.00	195.00	162.50	122.50	24.25	–	–
24	486.50	6.14	11.50	16.50	21.33	30.83	40.00	48.75	57.50	74.42	90.83	131.67	170.00	207.50	225.83	200.00	165.00	122.50	18.33	–	–
25	506.70	6.42	12.00	17.25	22.33	32.08	41.67	50.83	60.00	77.75	95.83	136.67	177.50	216.67	231.67	203.33	166.67	120.83	11.75	–	–
28	567.10	7.25	13.50	19.42	25.17	36.25	47.08	57.67	67.75	87.50	107.50	155.00	200.00	245.00	245.00	211.67	168.33	115.00	–	–	–
30	607.50	7.81	14.50	21.00	27.08	39.17	50.83	62.00	72.92	95.00	115.83	166.67	215.83	263.33	253.33	215.00	166.67	109.17	–	–	–
32	647.80	8.33	15.58	22.50	29.17	42.00	54.33	66.67	78.33	101.67	124.17	178.33	230.83	283.33	260.00	216.67	163.33	100.83	–	–	–
35	708.40	9.17	17.25	24.75	32.17	46.25	60.00	73.33	86.67	112.50	136.67	196.67	255.00	300.83	267.50	218.33	156.67	84.17	–	–	–
40	809.40	10.67	19.83	28.67	37.08	53.33	69.17	85.00	100.00	129.17	157.50	227.50	294.17	317.50	272.50	211.67	135.83	47.50	–	–	–

**5.10 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 48 B – 1  
76.2 mm pitch, European version**

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		5	10	15	20	25	30	40	50	60	80	100	125	150	175	200	250	300	350	400	450
		Hand lubrication				Drip lubrication				Oil bath lubrication				Forced feed lubrication							
13	318.40	4.87	9.08	13.08	16.92	20.75	24.42	31.67	38.67	45.58	59.00	72.17	88.33	104.17	119.17	121.67	109.17	88.33	61.58	29.17	–
14	342.40	5.27	9.83	14.17	18.33	22.42	26.42	34.25	41.92	49.33	64.00	78.17	95.83	112.50	129.17	129.17	115.00	92.50	63.33	27.92	–
15	366.50	5.68	10.58	15.25	19.83	24.17	28.50	36.92	45.17	53.17	68.92	84.17	103.33	121.67	140.00	136.67	120.83	96.67	64.58	26.17	–
16	390.60	6.09	11.33	16.33	21.25	25.92	30.58	39.58	48.42	57.00	73.83	90.00	110.00	130.00	147.50	143.33	126.67	100.00	65.33	24.00	–
17	414.70	6.51	12.17	17.50	22.67	27.67	32.58	42.25	51.67	60.83	78.83	96.67	117.50	139.17	155.00	150.83	131.67	103.33	65.83	21.33	–
18	438.80	6.92	12.92	18.58	24.08	29.42	34.67	44.92	54.92	64.75	84.17	102.50	125.00	147.50	162.50	157.50	136.67	105.83	65.75	18.08	–
19	463.00	7.33	13.67	19.75	25.58	31.25	36.75	47.67	58.25	68.67	89.17	108.33	132.50	156.67	169.17	163.33	141.67	108.33	65.25	14.33	–
20	487.10	7.76	14.50	20.83	27.00	33.00	38.92	50.42	61.58	72.58	94.17	115.00	140.83	165.83	175.83	170.00	145.83	110.00	64.42	10.17	–
21	511.30	8.18	15.25	22.00	28.50	34.75	41.00	53.08	64.92	76.50	99.17	120.83	148.33	174.17	182.50	175.83	150.00	111.67	63.08	5.42	–
22	535.50	8.58	16.00	23.08	29.92	36.58	43.08	55.83	68.25	80.42	104.17	127.50	155.83	183.33	189.17	181.67	153.33	113.33	61.42	0.40	–
23	559.60	9.00	16.83	24.25	31.42	38.42	45.25	58.58	71.67	84.17	109.17	133.33	163.33	192.50	195.00	186.67	157.50	114.17	59.17	–	–
24	583.80	9.42	17.58	25.33	32.92	40.17	47.33	61.33	75.00	88.33	114.17	140.00	170.83	201.67	200.83	191.67	160.00	114.17	56.58	–	–
25	608.00	9.83	18.42	26.50	34.33	42.00	49.50	64.08	78.33	92.50	120.00	146.67	179.17	211.67	206.67	196.67	163.33	114.17	53.42	–	–
28	680.50	11.17	20.83	30.00	38.83	47.42	55.92	72.50	88.33	104.17	135.00	165.00	201.67	229.17	222.50	210.00	170.00	112.50	41.75	–	–
30	729.00	12.00	22.42	32.25	41.83	51.17	60.25	78.08	95.83	112.50	145.83	178.33	217.50	240.00	231.67	217.50	172.50	109.17	31.67	–	–
32	777.40	12.92	24.00	34.58	44.83	54.83	64.58	83.33	102.50	120.83	155.83	190.83	233.33	250.00	240.00	224.17	174.17	105.00	19.92	–	–
35	850.10	14.17	26.50	38.17	49.42	60.42	71.17	92.50	112.50	132.50	172.50	210.00	257.50	263.33	251.67	232.50	174.17	95.00	–	–	–
40	973.20	16.42	30.58	44.08	57.08	69.75	82.17	106.67	130.00	153.33	197.50	243.33	290.00	282.50	265.83	240.83	168.33	71.83	–	–	–

**5.11 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 56 B – 1  
88.9 mm pitch, European version**

**DIN 8187**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		5	10	15	20	25	30	40	50	60	80	100	125	150	175	200	250	300	350	400	450
		Hand lubrication				Drip lubrication				Oil bath lubrication				Forced feed lubrication							
13	371.50	8.20	15.29	22.03	28.49	34.94	41.12	53.33	65.12	76.76	99.36	121.53	148.75	170.30	175.42	140.34	70.17	20.42	–	–	–
14	399.50	8.87	16.55	23.86	30.87	37.76	44.49	57.68	70.59	83.07	107.78	131.64	161.38	189.45	179.52	151.56	75.78	19.50	–	–	–
15	427.60	9.57	17.82	25.68	33.39	40.70	47.99	62.17	76.07	89.54	116.06	141.74	174.01	196.00	182.28	156.80	78.40	18.32	–	–	–
16	455.70	10.26	19.08	27.50	35.79	43.65	51.50	66.65	81.54	95.99	124.33	151.56	185.24	206.50	192.06	165.20	82.60	16.80	–	–	–
17	483.80	10.96	20.49	29.47	38.18	46.60	54.86	71.15	87.01	102.44	132.75	162.79	197.87	217.00	201.81	173.60	75.95	14.93	–	–	–
18	512.00	11.65	21.76	31.29	40.55	49.54	58.38	75.65	92.49	109.04	141.74	172.61	210.50	227.50	211.58	182.00	75.05	12.66	–	–	–
19	540.20	12.34	23.02	33.26	43.08	52.63	61.89	80.28	98.09	115.64	150.16	182.43	223.13	236.84	220.26	189.47	73.42	10.03	–	–	–
20	568.20	13.07	24.42	35.08	45.47	55.57	65.54	84.91	103.70	122.22	158.58	193.66	237.16	246.16	228.93	196.93	66.46	7.12	–	–	–
21	596.50	13.78	25.68	37.05	47.99	58.52	69.04	89.39	109.33	128.83	167.00	203.48	249.79	255.50	237.62	204.40	56.21	3.80	–	–	–
22	624.70	14.45	26.94	38.87	50.39	61.60	72.55	94.02	114.93	135.43	175.72	214.71	262.42	264.84	246.30	211.87	47.67	0.28	–	–	–
23	652.90	15.16	28.34	40.84	52.91	64.70	76.20	98.65	120.69	141.74	183.84	224.53	273.00	275.05	253.89	220.04	41.23	–	–	–	–
24	681.10	15.86	29.60	42.66	55.44	67.65	79.70	103.28	126.30	148.75	192.26	235.76	273.87	282.34	254.67	225.87	31.05	–	–	–	–
25	709.30	16.55	31.02	44.63	57.81	70.73	83.36	107.91	131.91	155.77	202.08	246.99	287.45	296.34	267.33	237.07	26.67	–	–	–	–
28	793.90	18.81	35.08	50.52	65.39	79.86	94.17	122.09	148.75	175.42	227.34	277.86	320.84	311.21	289.43	256.67	19.25	–	–	–	–
30	850.50	20.21	37.76	54.31	70.44	86.17	101.46	131.49	161.38	189.45	245.58	300.31	336.00	325.92	303.10	268.80	–	–	–	–	–
32	907.00	21.76	40.42	58.23	75.49	92.33	108.75	140.33	172.61	203.48	262.42	321.36	350.00	339.50	325.50	280.00	–	–	–	–	–
35	991.80	23.86	44.63	64.28	83.22	101.75	119.85	155.77	189.45	223.13	290.49	353.64	368.66	357.60	342.85	294.93	–	–	–	–	–
40	1133.10	27.65	51.50	74.23	96.12	117.46	138.37	179.63	218.92	258.21	332.59	406.00	399.91	383.64	371.92	324.80	–	–	–	–	–

**5.12 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 08 A – 1  
12.7 mm pitch, American version**

**ANSI 40-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		50	200	400	600	900	1200	1800	2400	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	9000
		Hand lubrication		Drip lubrication				Oil bath lubrication				Forced feed lubrication									
13	53.10	0.23	0.80	1.50	2.16	3.11	4.02	4.99	3.24	2.32	1.84	1.51	1.27	1.07	0.93	0.82	0.72	0.65	0.58	0.53	—
14	57.10	0.25	0.87	1.62	2.33	3.37	4.36	5.58	3.62	2.59	2.06	1.68	1.41	1.21	1.04	0.92	0.82	0.72	0.66	0.59	—
15	61.10	0.27	0.93	1.75	2.52	3.62	4.70	6.19	4.02	2.88	2.28	1.87	1.57	1.33	1.16	1.02	0.90	0.81	0.72	—	—
16	65.10	0.29	1.00	1.87	2.70	3.88	5.03	6.82	4.42	3.17	2.52	2.06	1.72	1.47	1.27	1.12	0.99	0.89	0.80	—	—
17	69.10	0.31	1.07	2.00	2.88	4.15	5.37	7.47	4.85	3.47	2.76	2.26	1.89	1.62	1.40	1.23	1.09	0.97	0.87	—	—
18	73.10	0.32	1.14	2.12	3.07	4.42	5.72	8.13	5.28	3.78	3.00	2.46	2.06	1.76	1.52	1.33	1.18	1.06	0.96	—	—
19	77.20	0.35	1.21	2.26	3.25	4.68	6.06	8.75	5.73	4.10	3.26	2.67	2.23	1.91	1.65	1.45	1.28	1.15	1.04	—	—
20	81.20	0.37	1.27	2.38	3.43	4.95	6.41	9.25	6.19	4.42	3.52	2.88	2.41	2.06	1.78	1.57	1.39	1.24	1.12	—	—
21	85.20	0.38	1.35	2.52	3.62	5.22	6.76	9.75	6.66	4.77	3.78	3.09	2.59	2.22	1.92	1.68	1.49	1.33	1.21	—	—
22	89.20	0.41	1.42	2.64	3.81	5.48	7.10	10.25	7.14	5.11	4.06	3.32	2.78	2.37	2.06	1.81	1.60	1.43	—	—	—
23	93.30	0.42	1.48	2.77	3.99	5.75	7.45	10.75	7.63	5.46	4.33	3.55	2.97	2.54	2.20	1.93	1.72	1.53	—	—	—
24	97.30	0.45	1.56	2.90	4.18	6.02	7.80	11.25	8.13	5.82	4.62	3.78	3.17	2.71	2.34	2.06	1.82	1.63	—	—	—
25	101.30	0.47	1.62	3.03	4.37	6.29	8.15	11.75	8.67	6.19	4.91	4.02	3.37	2.88	2.49	2.19	1.94	—	—	—	—
28	113.40	0.52	1.83	3.42	4.94	7.12	9.25	13.25	10.25	7.33	5.82	4.77	3.99	3.41	2.96	2.59	2.30	—	—	—	—
30	121.50	0.57	1.98	3.69	5.32	7.67	9.92	14.33	11.33	8.13	6.46	5.28	4.42	3.78	3.27	2.88	—	—	—	—	—
32	129.60	0.61	2.12	3.96	5.71	8.22	10.67	15.33	12.50	9.00	7.12	5.82	4.88	4.17	3.61	3.17	—	—	—	—	—
35	141.70	0.67	2.33	4.37	6.28	9.08	11.75	16.92	14.33	10.25	8.13	6.66	5.58	4.77	4.13	—	—	—	—	—	—
40	161.90	0.77	2.70	5.04	7.26	10.42	13.58	19.50	17.50	12.50	9.92	8.13	6.82	5.82	—	—	—	—	—	—	—

**5.13 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 10 A – 1  
15.875 mm pitch, American version**

**ANSI 50-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		50	100	300	500	900	1200	1500	1800	2100	2400	2700	3000	3300	3500	4000	4500	5000	5400	5800	6200
		Hand lubrication		Drip lubrication			Oil bath lubrication					Forced feed lubrication									
13	66.30	0.45	0.84	2.25	3.55	6.05	7.85	7.97	5.97	4.72	3.88	3.25	2.77	2.41	2.21	1.80	1.51	1.29	1.14	1.03	—
14	71.30	0.48	0.91	2.43	3.83	6.56	8.50	8.92	6.67	5.28	4.33	3.63	3.10	2.69	2.47	2.01	1.68	1.44	1.27	—	—
15	76.40	0.52	0.97	2.62	4.14	7.07	9.17	9.92	7.41	5.86	4.80	4.02	3.44	2.98	2.73	2.23	1.87	1.60	1.42	—	—
16	81.40	0.56	1.05	2.81	4.44	7.57	9.83	10.92	8.16	6.45	5.29	4.43	3.78	3.28	3.02	2.46	2.06	1.76	1.57	—	—
17	86.40	0.60	1.12	3.00	4.74	8.08	10.50	11.92	8.92	7.07	5.79	4.86	4.15	3.60	3.30	2.69	2.26	1.93	1.71	—	—
18	91.40	0.64	1.19	3.19	5.04	8.58	11.17	13.00	9.75	7.70	6.32	5.29	4.52	3.92	3.59	2.93	2.46	2.11	—	—	—
19	96.40	0.67	1.26	3.38	5.35	9.08	11.83	14.08	10.58	8.33	6.85	5.74	4.90	4.25	3.90	3.18	2.67	2.28	—	—	—
20	101.50	0.72	1.33	3.58	5.65	9.67	12.50	15.17	11.42	9.00	7.39	6.20	5.29	4.59	4.21	3.43	2.88	2.47	—	—	—
21	106.50	0.75	1.41	3.78	5.96	10.17	13.17	16.08	12.25	9.67	7.96	6.67	5.69	4.94	4.53	3.70	3.09	2.66	—	—	—
22	111.60	0.79	1.47	3.97	6.27	10.67	13.83	16.92	13.17	10.42	8.50	7.16	6.11	5.30	4.86	3.97	3.32	2.85	—	—	—
23	116.60	0.83	1.55	4.17	6.57	11.17	14.50	17.75	14.08	11.08	9.08	7.65	6.52	5.66	5.19	4.23	3.55	—	—	—	—
24	121.60	0.87	1.62	4.36	6.88	11.75	15.25	18.58	15.00	11.83	9.75	8.15	6.95	6.03	5.53	4.52	3.78	—	—	—	—
25	126.70	0.91	1.70	4.56	7.19	12.25	15.92	19.42	15.92	12.58	10.33	8.67	7.40	6.42	5.88	4.80	4.02	—	—	—	—
28	141.80	1.00	1.92	5.15	8.13	13.83	18.00	21.92	18.92	14.92	12.25	10.25	8.75	7.61	6.97	5.69	—	—	—	—	—
30	151.90	1.11	2.02	5.55	8.75	14.92	19.33	23.67	20.92	16.58	13.58	11.42	9.75	8.42	7.73	6.31	—	—	—	—	—
32	162.00	1.18	2.22	5.95	9.42	16.00	20.75	25.33	23.08	18.25	15.00	12.50	10.75	9.25	8.50	6.95	—	—	—	—	—
35	177.10	1.31	2.44	6.55	10.33	17.67	22.83	27.92	26.42	20.92	17.08	14.33	12.25	10.67	9.75	7.96	—	—	—	—	—
40	202.30	1.51	2.82	7.57	11.92	20.33	25.92	32.25	32.25	25.50	20.92	17.50	15.00	13.00	11.92	—	—	—	—	—	—

**5.14 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 12 A-1  
19.05 mm pitch, American version**

**ANSI 60-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		50	100	200	500	700	900	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	3800	4000	4600
		Hand lubrication		Drip lubrication		Oil bath lubrication						Forced feed lubrication									
13	79.60	0.77	1.43	2.68	6.12	8.30	10.42	12.75	10.08	8.24	6.95	5.90	5.12	4.49	3.98	3.57	3.21	2.55	2.25	2.08	–
14	85.60	0.83	1.56	2.91	6.62	9.00	11.33	14.25	11.33	9.25	7.77	6.59	5.72	5.02	4.45	3.98	3.58	2.85	2.51	2.33	–
15	91.60	0.90	1.67	3.13	7.14	9.67	12.17	15.75	12.50	10.25	8.58	7.31	6.34	5.57	4.94	4.42	3.97	3.16	2.78	2.58	–
16	97.60	0.97	1.80	3.36	7.66	10.42	13.08	16.92	13.83	11.25	9.50	8.05	6.98	6.13	5.44	4.87	4.38	3.47	3.07	2.85	–
17	103.70	1.03	1.92	3.59	8.18	11.08	13.92	18.08	15.17	12.33	10.42	8.83	7.65	6.72	5.96	5.33	4.79	3.81	3.36	3.12	–
18	109.70	1.10	2.04	3.82	8.67	11.75	14.83	19.17	16.50	13.42	11.33	9.58	8.33	7.32	6.49	5.81	5.22	4.15	3.66	3.40	–
19	115.70	1.17	2.17	4.05	9.25	12.50	15.67	20.33	17.92	14.58	12.25	10.42	9.08	7.93	7.04	6.30	5.67	4.50	3.97	3.68	–
20	121.80	1.23	2.29	4.28	9.75	13.25	16.58	21.50	19.33	15.75	13.25	11.25	9.75	8.58	7.60	6.81	6.12	4.86	4.28	–	–
21	127.80	1.30	2.41	4.51	10.25	13.92	17.50	22.67	20.75	16.92	14.25	12.08	10.50	9.25	8.18	7.32	6.58	5.22	4.61	–	–
22	133.90	1.37	2.53	4.74	10.83	14.67	18.42	23.83	22.25	18.17	15.33	13.00	11.25	9.92	8.75	7.85	7.06	5.61	4.94	–	–
23	139.90	1.43	2.66	4.97	11.33	15.33	19.33	25.00	23.83	19.42	16.33	13.92	12.00	10.58	9.42	8.42	7.55	5.99	–	–	–
24	145.90	1.50	2.78	5.21	11.83	16.08	20.25	26.17	25.33	20.67	17.42	14.75	12.83	11.25	10.00	8.92	8.04	6.38	–	–	–
25	152.00	1.57	2.91	5.44	12.42	16.83	21.17	27.42	27.00	22.00	18.58	15.75	13.67	12.00	10.67	9.50	8.58	6.79	–	–	–
28	170.10	1.77	3.29	6.15	14.00	19.00	23.92	30.92	32.00	26.08	22.00	18.67	16.17	14.17	12.58	11.25	10.17	8.05	–	–	–
30	182.30	1.91	3.54	6.62	15.08	20.50	25.75	33.33	35.50	28.92	24.33	20.67	17.92	15.75	14.00	12.50	11.25	–	–	–	–
32	194.40	2.04	3.80	7.11	16.17	21.92	27.58	35.75	39.08	31.83	26.83	22.75	19.75	17.33	15.42	13.75	12.42	–	–	–	–
35	212.50	2.25	4.18	7.83	17.83	24.17	30.42	39.42	44.67	36.42	30.75	26.08	22.58	19.83	17.58	15.75	14.17	–	–	–	–
40	242.80	2.60	4.83	9.08	20.58	27.92	35.08	45.50	52.25	44.50	37.50	31.83	27.58	24.25	21.50	19.25	–	–	–	–	–

**5.15 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 16 A – 1  
25.4 mm pitch, American version**

**ANSI 80-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		25	50	100	200	300	400	500	700	900	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
		Hand lubrication		Drip lubrication		Oil bath lubrication						Forced feed lubrication									
13	106.10	0.97	1.80	3.36	6.26	9.00	11.67	14.25	19.33	24.25	21.00	16.00	12.67	10.42	8.67	7.42	6.43	5.65	5.01	4.48	–
14	114.10	1.04	1.95	3.63	6.78	9.75	12.67	15.50	20.92	26.25	23.50	17.83	14.17	11.58	9.75	8.30	7.19	6.31	5.60	5.01	–
15	122.20	1.12	2.10	3.92	7.31	10.50	13.67	16.67	22.58	28.33	26.00	19.83	15.75	12.83	10.75	9.17	7.97	7.00	6.21	0.35	–
16	130.20	1.21	2.25	4.20	7.83	11.25	14.58	17.83	24.17	30.33	28.67	21.83	17.33	14.17	11.83	10.17	8.75	7.71	6.84	–	–
17	138.20	1.29	2.40	4.48	8.33	12.08	15.58	19.08	25.83	32.42	31.33	23.83	18.92	15.50	13.00	11.08	9.58	8.42	7.47	–	–
18	146.30	1.37	2.56	4.77	8.92	12.83	16.58	20.33	27.50	34.42	34.17	26.00	20.67	16.92	14.17	12.08	10.50	9.17	8.16	–	–
19	154.30	1.45	2.71	5.06	9.42	13.58	17.58	21.50	29.17	36.50	37.08	28.25	22.42	18.33	15.33	13.08	11.33	10.00	8.83	–	–
20	162.40	1.53	2.87	5.35	10.00	14.33	18.58	22.75	30.83	38.67	40.08	30.50	24.17	19.83	16.58	14.17	12.25	10.75	0.79	–	–
21	170.40	1.62	3.02	5.63	10.50	15.17	19.67	24.00	32.50	40.75	43.08	32.83	26.00	21.33	17.83	15.25	13.25	11.58	–	–	–
22	178.50	1.70	3.17	5.92	11.08	15.92	20.67	25.25	34.17	42.83	46.25	35.17	27.92	22.83	19.17	16.33	14.17	12.42	–	–	–
23	186.50	1.78	3.33	6.22	11.58	16.67	21.67	26.42	35.83	44.92	49.33	37.58	29.83	24.42	20.50	17.50	15.17	13.25	–	–	–
24	194.60	1.87	3.49	6.51	12.17	17.50	22.67	27.75	37.50	47.00	51.67	40.08	31.75	26.00	21.83	18.58	16.17	14.17	–	–	–
25	202.70	1.95	3.65	6.81	12.67	18.25	23.67	29.00	39.17	49.17	54.08	42.58	33.83	27.67	23.17	19.83	17.17	6.95	–	–	–
28	226.80	2.21	4.12	7.69	14.33	20.67	26.75	32.75	44.33	55.50	61.08	50.50	40.08	32.83	27.50	23.50	20.33	–	–	–	–
30	243.00	2.37	4.44	8.28	15.42	22.25	28.83	35.25	47.75	59.83	65.75	56.00	44.42	36.33	30.50	26.00	20.42	–	–	–	–
32	259.10	2.55	4.76	8.92	16.58	23.83	30.92	37.75	51.17	64.17	70.58	61.67	48.92	40.08	33.36	28.67	–	–	–	–	–
35	283.40	2.81	5.24	9.75	18.25	26.33	34.08	41.67	56.42	70.67	77.75	70.58	56.00	45.83	38.42	32.83	–	–	–	–	–
40	323.70	3.24	6.06	11.33	21.08	30.33	39.33	48.08	65.08	81.67	90.00	85.83	68.42	56.00	46.92	–	–	–	–	–	–

**5.16 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 20 A – 1  
31.75 mm pitch, American version**

**ANSI 100-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		10	25	50	100	200	300	400	500	600	700	800	900	1000	1100	1200	1400	1600	1800	2000	2200
		Hand lubrication				Drip lubrication		Oil bath lubrication					Forced feed lubrication								
13	132.70	0.81	1.85	3.44	6.43	12.00	17.25	22.42	27.33	32.25	37.08	35.08	29.42	25.08	21.75	19.08	15.17	12.42	10.42	–	–
14	142.70	0.87	2.00	3.73	6.96	13.00	18.75	24.25	29.67	34.92	40.08	39.17	32.83	28.00	24.33	21.33	16.92	13.83	11.58	–	–
15	152.70	0.94	2.16	4.02	7.50	14.00	20.17	26.17	31.92	37.67	43.25	43.50	36.42	31.08	27.00	23.67	18.75	15.42	12.92	–	–
16	162.70	1.02	2.31	4.31	8.04	15.00	21.58	28.00	34.25	40.33	46.33	47.92	40.08	34.25	29.67	26.08	20.67	16.92	14.17	–	–
17	172.80	1.08	2.47	4.60	8.58	16.00	23.08	29.92	36.58	43.08	49.50	52.42	43.92	37.50	32.50	28.50	22.67	18.50	15.17	–	–
18	182.20	1.15	2.62	4.89	9.17	17.00	24.58	31.83	38.92	45.83	52.67	57.17	47.92	40.92	35.42	31.08	24.67	20.25	13.83	–	–
19	192.90	1.22	2.78	5.19	9.67	18.08	26.00	33.75	41.25	48.58	55.83	62.00	51.92	44.33	38.42	33.75	26.75	21.92	5.58	–	–
20	202.90	1.29	2.94	5.48	10.25	19.08	27.50	35.67	43.58	51.33	59.00	66.50	56.08	47.92	41.50	36.42	28.92	23.67	–	–	–
21	213.00	1.36	3.10	5.78	10.75	20.17	29.00	37.58	45.92	54.08	62.17	70.08	60.33	51.50	44.67	39.17	31.08	25.42	–	–	–
22	223.10	1.42	3.26	6.08	11.33	21.17	30.50	39.50	48.33	56.92	65.42	73.75	64.75	55.25	47.92	42.00	33.33	27.33	–	–	–
23	233.20	1.50	3.42	6.38	11.92	22.17	32.00	41.42	50.67	59.75	68.58	77.33	69.17	59.08	51.17	44.92	35.67	29.17	–	–	–
24	243.20	1.57	3.58	6.68	12.50	23.25	33.50	43.42	53.08	62.50	71.83	81.00	73.67	62.92	54.58	47.83	38.00	31.08	–	–	–
25	253.30	1.64	3.74	6.97	13.00	24.33	35.00	45.33	55.42	65.33	75.08	85.00	78.42	66.92	58.00	50.92	40.42	30.25	–	–	–
28	283.60	1.85	4.22	7.89	14.75	27.50	39.58	51.25	62.67	73.83	85.00	95.83	92.50	79.33	68.75	60.33	47.92	4.12	–	–	–
30	303.80	2.00	4.56	8.50	15.83	29.58	42.67	55.25	67.50	79.58	91.67	103.33	103.33	88.33	76.25	66.92	53.08	–	–	–	–
32	323.90	2.14	4.88	9.08	17.00	31.75	45.67	59.25	72.42	85.00	98.33	110.83	113.33	96.67	84.17	73.75	58.50	–	–	–	–
35	354.20	2.36	5.38	10.00	18.75	34.92	50.33	65.25	79.75	94.17	108.33	121.67	130.00	110.83	95.83	84.17	40.33	–	–	–	–
40	404.70	2.72	6.22	11.58	21.67	40.33	58.17	75.33	92.50	108.33	125.00	140.83	156.67	135.83	117.50	103.33	–	–	–	–	–

**5.17 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 24 A – 1  
38.1 mm pitch, American version**

**ANSI 120-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		10	25	50	100	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
		Hand lubrication		Drip lubrication			Oil bath lubrication					Forced feed lubrication									
13	159.20	1.37	3.12	5.81	10.83	15.58	20.25	29.17	37.75	46.17	54.42	49.50	40.50	33.92	29.00	25.08	22.08	19.58	17.50	15.75	—
14	171.20	1.47	3.38	6.29	11.75	16.92	21.92	31.58	40.92	50.00	58.92	55.33	45.25	37.92	32.42	28.08	24.67	21.83	19.58	10.50	—
15	183.30	1.59	3.63	6.77	12.67	18.25	23.58	34.00	44.08	53.83	63.42	61.33	50.25	42.08	35.92	31.17	27.33	24.25	21.67	3.75	—
16	195.30	1.71	3.89	7.27	13.58	19.50	25.33	36.50	47.25	57.75	68.08	67.58	55.33	46.33	39.58	34.33	30.08	26.67	23.92	—	—
17	207.30	1.82	4.16	7.76	14.50	20.83	27.00	38.92	50.42	61.67	72.67	74.00	60.58	50.75	43.33	37.58	33.00	29.25	26.17	—	—
18	219.40	1.94	4.42	8.25	15.42	22.17	28.75	41.42	53.58	65.50	77.25	80.58	66.00	55.33	47.25	40.92	36.00	31.92	23.83	—	—
19	231.50	2.06	4.68	8.75	16.33	23.50	30.42	43.92	56.83	69.50	81.92	87.50	71.58	60.00	51.17	44.42	38.92	34.58	17.33	—	—
20	243.60	2.17	4.96	9.25	17.25	24.83	32.17	46.42	60.08	73.50	86.67	94.17	77.33	64.75	55.33	47.92	42.08	37.33	9.25	—	—
21	255.60	2.29	5.22	9.75	18.17	26.17	33.92	48.92	63.33	77.50	91.67	101.67	83.17	69.67	59.50	51.58	45.25	40.17	—	—	—
22	267.70	2.41	5.49	10.25	19.17	27.58	35.67	51.42	66.58	81.42	95.83	109.17	89.17	74.75	63.83	55.33	48.50	41.83	—	—	—
23	279.80	2.52	5.77	10.75	20.08	28.92	37.50	54.00	69.92	85.83	100.83	115.83	95.00	79.92	68.17	59.08	51.92	35.33	—	—	—
24	291.90	2.65	6.04	11.25	21.00	30.33	39.25	56.50	73.25	89.17	105.83	120.83	101.67	85.00	72.67	62.92	55.25	27.17	—	—	—
25	304.00	2.77	6.31	11.75	22.00	31.67	41.00	59.08	76.50	93.33	110.00	126.67	108.33	90.83	77.33	67.00	58.75	—	—	—	—
28	340.30	3.12	7.12	13.33	24.83	35.75	46.33	66.75	86.67	105.83	124.17	143.33	128.33	107.50	91.67	79.42	—	—	—	—	—
30	364.50	3.37	7.68	14.33	26.75	38.58	49.92	71.92	93.33	114.17	134.17	154.17	141.67	119.17	101.67	88.33	—	—	—	—	—
32	388.70	3.61	8.23	15.33	28.67	41.25	53.42	77.00	100.00	121.67	143.33	165.00	156.67	130.83	111.67	85.00	—	—	—	—	—
35	425.00	3.97	9.08	16.92	31.58	45.50	58.92	85.00	110.00	134.17	158.33	181.67	179.17	150.00	128.33	56.92	—	—	—	—	—
40	485.60	4.59	10.50	19.58	36.50	52.58	68.08	98.33	127.50	155.00	183.33	210.00	212.50	170.00	85.83	—	—	—	—	—	—



**5.18 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 28 A – 1  
44.45 mm pitch, American version**

**ANSI 140-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		10	25	50	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000	1100	1200
		Hand lubrication		Drip lubrication		Oil bath lubrication								Forced feed lubrication							
13	185.80	2.12	4.85	9.08	16.92	24.33	31.50	38.50	45.33	52.08	58.75	65.33	71.83	78.25	70.50	55.92	45.75	38.33	32.75	28.42	—
14	199.80	2.30	5.26	9.83	18.33	26.33	34.17	41.75	49.17	56.50	63.75	70.83	77.92	84.17	78.75	62.50	51.17	42.83	36.58	31.67	—
15	213.80	2.48	5.67	10.58	19.75	28.42	36.75	45.00	53.00	60.92	68.67	76.33	84.17	91.67	87.50	69.33	56.75	47.58	40.58	33.33	—
16	227.90	2.66	6.07	11.33	21.17	30.42	39.42	48.25	56.83	65.25	73.58	81.83	90.00	98.33	95.83	76.33	62.50	52.33	44.75	28.92	—
17	241.90	2.84	6.47	12.08	22.58	32.50	42.08	51.42	60.67	69.67	78.50	87.50	95.83	105.00	105.00	83.33	68.50	57.33	49.00	24.83	—
18	256.00	3.02	6.88	12.83	24.00	34.50	44.75	54.67	64.42	74.00	83.33	92.50	101.67	110.83	115.00	90.83	75.00	62.50	53.33	18.92	—
19	270.10	3.20	7.31	13.33	25.42	36.67	47.50	58.33	68.42	78.58	88.33	98.33	108.33	118.33	124.17	99.17	80.92	67.75	57.83	10.83	—
20	284.10	3.38	7.72	14.42	26.83	38.67	50.08	61.25	72.25	82.92	93.33	104.17	114.17	125.00	134.17	106.67	87.50	73.17	60.83	4.33	—
21	298.30	3.57	8.14	15.17	28.33	40.83	52.83	64.67	76.17	87.50	98.33	110.00	120.83	131.67	142.50	115.00	94.17	78.75	57.50	—	—
22	312.30	3.75	8.58	16.00	29.83	42.92	55.58	68.00	80.17	92.50	104.17	115.83	126.67	138.33	150.00	123.33	100.83	84.17	51.67	—	—
23	326.40	3.94	9.00	16.75	31.25	45.08	58.33	71.33	84.17	96.67	109.17	120.83	133.33	145.00	156.67	131.67	107.50	90.00	46.67	—	—
24	340.50	4.12	9.42	17.58	32.75	47.17	61.08	74.75	88.33	100.83	114.17	126.67	139.17	151.67	164.17	140.00	115.00	95.83	38.75	—	—
25	354.70	4.31	9.83	18.33	34.25	49.33	63.83	78.08	91.67	105.83	119.17	132.50	145.83	158.33	171.67	149.17	122.50	100.00	31.50	—	—
28	397.00	4.87	11.08	20.75	38.67	55.67	72.08	88.33	104.17	119.17	135.00	150.00	164.17	179.17	194.17	176.67	145.00	81.67	—	—	—
30	425.30	5.24	12.00	22.33	41.67	60.00	77.67	95.00	111.67	128.33	145.00	161.67	177.50	193.33	209.17	195.83	145.83	69.17	—	—	—
32	453.50	5.62	12.83	23.92	44.67	64.33	83.25	101.67	120.00	137.50	155.83	172.50	190.00	206.67	223.33	210.00	140.00	54.00	—	—	—
35	495.90	6.20	14.17	26.33	49.25	70.92	91.67	112.50	132.50	151.67	171.67	190.83	209.17	228.33	246.67	201.67	119.17	24.00	—	—	—
40	566.60	7.16	16.33	30.50	56.83	81.83	105.83	130.00	152.50	175.83	198.33	220.00	241.67	263.33	258.33	173.33	71.67	—	—	—	—

Performance diagrams

**5.19 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 32 A – 1  
50.8 mm pitch, American version**

**ANSI 160-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																				
		10	25	50	100	150	200	250	300	350	400	500	550	600	700	750	800	850	900	950	1000	
		Hand lubr.	Drip lubrication			Oil bath lubrication					Forced feed lubrication											
13	212.30	3.06	7.02	13.08	24.33	35.00	45.33	55.50	65.33	75.08	85.00	103.33	90.00	78.50	62.50	56.25	51.17	30.67	15.00	—	—	
14	228.30	3.32	7.58	14.17	26.33	37.92	49.17	60.08	70.75	81.42	91.67	112.50	100.00	87.50	69.83	62.83	57.17	28.50	11.25	—	—	
15	244.30	3.57	8.22	15.25	28.42	40.83	52.92	64.75	76.25	87.50	99.17	120.83	111.67	97.50	77.50	69.75	55.25	26.33	7.50	—	—	
16	260.40	3.83	8.75	16.33	30.42	43.75	56.75	69.42	81.75	94.17	105.83	130.00	122.50	107.50	85.00	71.58	53.33	24.17	4.17	—	—	
17	276.50	4.08	9.33	17.42	32.50	46.75	60.58	74.08	87.50	100.00	113.33	138.33	134.17	117.50	93.33	73.42	51.42	22.00	—	—	—	
18	292.60	4.34	10.00	18.58	34.58	49.67	64.42	78.75	92.50	106.67	120.00	147.50	146.67	128.33	101.67	75.33	49.50	19.83	—	—	—	
19	308.70	4.61	10.58	19.67	36.67	52.67	68.33	83.33	98.33	113.33	127.50	156.67	158.33	138.33	110.83	77.50	47.50	17.67	—	—	—	
20	324.70	4.87	11.17	20.83	38.75	55.75	72.25	88.33	104.17	120.00	135.00	165.00	176.67	150.00	112.50	79.17	45.00	15.00	—	—	—	
21	340.90	5.13	11.75	21.92	40.83	58.75	76.17	93.33	110.00	125.83	142.50	174.17	178.33	160.83	106.67	72.75	40.50	12.83	—	—	—	
22	357.00	5.40	12.42	23.08	43.00	61.75	80.08	97.50	115.00	132.50	149.17	183.33	180.00	172.50	100.83	66.33	36.00	—	—	—	—	
23	373.10	5.67	13.00	24.17	45.08	64.75	84.17	102.50	120.83	139.17	156.67	192.50	181.67	170.83	95.00	59.92	31.50	—	—	—	—	
24	389.20	5.93	13.58	25.33	47.17	67.83	88.33	107.50	126.67	145.83	164.17	200.00	183.33	169.17	89.17	53.50	27.00	—	—	—	—	
25	405.30	6.20	14.25	26.50	49.33	70.92	91.67	112.50	132.50	152.50	171.67	207.50	185.00	167.50	83.33	47.08	15.83	—	—	—	—	
28	453.70	7.01	16.08	29.92	55.75	80.08	104.17	126.67	149.17	172.50	194.17	216.67	188.33	162.50	65.83	27.92	—	—	—	—	—	
30	486.00	7.55	17.25	32.25	60.08	86.67	111.67	136.67	160.83	185.00	209.17	225.00	191.67	158.33	54.17	15.00	—	—	—	—	—	
32	518.30	8.09	18.58	34.58	64.42	92.50	120.00	146.67	172.50	199.17	224.17	221.67	185.00	149.17	43.33	—	—	—	—	—	—	
35	566.70	8.92	20.42	38.08	70.92	101.67	132.50	161.67	190.00	219.17	246.67	219.17	179.17	136.67	25.00	—	—	—	—	—	—	
40	647.50	10.33	23.58	44.00	81.92	117.50	152.50	186.67	220.00	253.33	285.00	216.67	166.67	112.50	—	—	—	—	—	—	—	

**5.20 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 40 A – 1  
63.5 mm pitch, American version**

**ANSI 200-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		5	10	15	20	30	40	50	60	80	100	150	200	250	300	350	400	450	550	600	650
		Hand lubrication				Drip lubrication				Oil bath lubrication				Forced feed lubrication							
13	265.40	3.02	5.62	8.09	10.50	15.08	19.58	23.92	28.17	36.50	44.67	64.33	83.25	101.67	120.00	128.33	114.17	95.83	50.00	22.50	–
14	285.40	3.26	6.09	8.75	11.33	16.33	21.25	25.92	30.50	39.58	48.33	69.67	90.00	110.00	130.00	135.83	120.00	100.00	49.83	19.83	–
15	305.40	3.52	6.56	9.42	12.25	17.67	22.83	27.92	32.92	42.67	52.08	75.08	97.50	119.17	143.33	143.33	125.83	104.17	49.17	16.75	–
16	325.50	3.77	7.03	10.17	13.08	18.92	24.50	29.92	35.25	45.67	55.83	80.50	104.17	127.50	150.00	150.00	130.83	107.50	47.92	12.92	–
17	345.60	4.02	7.51	10.83	14.00	20.17	26.17	32.00	37.67	48.75	59.67	85.83	111.67	135.83	156.67	155.83	135.83	110.00	46.00	8.42	–
18	365.70	4.28	7.98	11.50	14.92	21.50	27.83	34.00	40.00	51.92	63.42	91.67	118.33	145.00	162.50	161.67	140.00	112.50	43.75	3.42	–
19	385.80	4.53	8.50	12.17	15.83	22.75	29.50	36.00	42.42	55.00	67.25	96.67	125.83	153.33	169.17	167.50	143.33	114.17	40.67	–	–
20	405.90	4.80	8.92	12.92	16.67	24.08	31.17	38.08	44.92	58.17	71.08	102.50	132.50	162.50	191.67	172.50	147.50	115.83	37.17	–	–
21	426.10	5.06	9.42	13.58	17.58	25.33	32.83	40.17	47.33	61.33	74.92	108.33	140.00	170.83	197.50	177.50	150.00	116.67	33.00	–	–
22	446.20	5.32	9.92	14.25	18.50	26.67	34.58	42.25	49.75	64.50	78.83	113.33	146.67	180.00	204.17	181.67	152.50	116.67	28.42	–	–
23	466.30	5.58	10.42	15.00	19.42	28.00	36.25	44.33	52.17	67.67	82.67	119.17	154.17	188.33	210.00	185.83	155.00	116.67	23.08	–	–
24	486.50	5.84	10.92	15.67	20.33	29.33	38.00	46.42	54.67	70.83	86.67	125.00	161.67	197.50	215.00	190.00	156.67	116.67	17.50	–	–
25	506.70	6.10	11.42	16.42	21.25	30.58	39.67	48.50	57.08	74.00	90.83	130.00	169.17	206.67	220.00	193.33	158.33	115.00	11.17	–	–
28	567.10	6.90	12.83	18.50	24.00	34.58	44.83	54.83	64.50	83.33	102.50	147.50	190.83	233.33	233.33	201.67	160.00	110.00	–	–	–
30	607.50	7.43	13.83	20.00	25.83	37.25	48.33	59.00	69.50	90.00	110.00	158.33	205.83	250.83	240.83	205.00	159.17	104.17	–	–	–
32	647.80	7.97	14.83	21.42	27.75	40.00	51.75	63.33	74.58	96.67	118.33	170.00	220.00	269.17	247.50	206.67	155.83	95.83	–	–	–
35	708.40	8.75	16.42	23.58	30.58	44.00	57.08	69.75	82.17	106.67	130.00	187.50	242.50	286.67	254.17	207.50	149.17	80.17	–	–	–
40	809.40	10.17	18.92	27.25	35.33	50.83	65.92	80.58	95.00	123.33	150.00	216.67	280.00	302.50	259.17	200.83	129.17	45.50	–	–	–

**5.21 Transmittable output's (kW)  
for Rex-High-Capacity-Roller Chains 48 A – 1  
76.2 mm pitch, American version**

**ANSI 240-1 / DIN 8188**

Number of teeth	Reference Ø mm	Small sprocket revolution																			
		5	10	15	20	25	30	40	50	60	80	100	125	150	175	200	250	300	350	400	450
		Hand lubrication				Drip lubrication				Oil bath lubrication				Forced feed lubrication							
13	318.40	3.89	7.27	10.47	13.53	16.67	19.50	25.33	30.92	36.50	47.17	52.50	70.83	83.33	95.00	97.50	87.50	70.83	49.17	23.33	–
14	342.40	4.22	7.87	11.33	14.67	17.92	21.17	27.42	33.50	39.50	51.17	62.50	76.67	90.00	103.33	103.33	91.67	74.17	50.83	22.30	–
15	366.50	4.55	8.47	12.20	15.83	19.33	22.83	29.58	36.17	42.50	55.17	67.50	82.67	97.50	111.67	109.17	96.67	77.50	51.67	21.00	–
16	390.60	4.87	9.07	13.07	17.00	20.83	24.50	31.67	38.75	45.58	59.17	72.00	89.17	104.17	118.33	115.00	101.67	80.00	52.50	19.20	–
17	414.70	5.19	9.73	14.00	18.17	22.17	26.08	33.83	41.33	48.67	63.08	77.50	94.17	111.67	124.17	120.83	105.00	82.50	52.50	17.10	–
18	438.80	5.53	10.33	14.88	19.25	23.50	27.75	35.92	43.92	51.75	67.50	82.00	100.00	118.33	130.00	125.83	109.17	85.00	52.50	14.50	–
19	463.00	5.88	10.93	15.80	20.50	25.00	29.42	38.17	46.67	55.00	71.33	86.67	105.83	125.00	135.00	130.83	113.33	86.67	56.67	11.45	–
20	487.10	6.21	11.60	16.67	21.67	26.42	31.17	40.33	49.25	58.33	75.83	91.67	112.50	133.33	140.83	135.83	116.67	88.33	55.83	8.20	–
21	511.30	6.54	12.20	17.58	22.83	27.83	32.83	42.50	51.92	61.25	79.33	96.67	118.33	139.17	145.83	140.83	120.00	89.17	50.83	4.33	–
22	535.50	6.87	12.80	18.47	24.00	29.25	34.50	44.67	54.58	64.50	83.33	101.67	125.00	146.67	151.67	145.00	122.50	90.83	49.17	–	–
23	559.60	7.20	13.47	19.40	25.17	30.83	36.25	46.83	57.33	67.50	87.50	106.67	130.83	154.17	155.83	149.17	125.83	91.67	47.50	–	–
24	583.80	7.53	14.13	20.28	26.67	32.17	37.92	49.08	60.00	70.83	91.67	111.67	136.67	161.67	160.83	153.33	128.33	91.67	45.00	–	–
25	608.00	7.87	14.73	21.20	27.50	33.58	39.58	51.25	62.67	74.17	95.83	117.50	143.33	169.17	165.00	157.50	130.83	91.67	42.50	–	–
28	680.50	8.93	16.67	24.00	31.00	37.83	44.75	58.33	70.67	83.33	108.33	131.67	161.67	183.33	178.33	168.33	135.83	90.00	33.33	–	–
30	729.00	9.60	17.92	25.83	33.33	40.92	48.17	62.50	76.67	90.00	116.67	142.50	174.17	191.67	185.00	174.17	138.33	87.50	25.00	–	–
32	777.40	10.33	18.87	27.67	35.83	43.83	51.67	66.67	82.00	96.67	124.67	152.50	186.67	200.00	191.67	179.17	139.17	84.17	15.83	–	–
35	850.10	11.33	21.20	30.50	39.58	48.33	56.92	74.17	90.00	106.00	138.00	168.33	205.83	210.83	201.67	185.83	139.17	75.83	–	–	–
40	973.20	13.13	24.47	35.25	45.83	55.83	65.75	85.33	104.17	122.67	158.33	195.00	231.67	225.83	212.50	192.50	135.00	57.50	–	–	–

d) la ultima consideración y control sobre la cadena preseleccionada representa la verificación de los cálculos en función de la **duración a desgaste** de una cadena de rodillos. La tabla a continuación indica las presiones máximas de trabajo de las articulaciones de las cadenas en función de las velocidades. Tener en cuenta que las presiones indicadas son máximas y por lo tanto cuanto mas nos acerquemos a estos valores menos vida útil a desgaste tendrá nuestra cadena.

Velocidad cadena m/s	Presión permisible en el área del eslabón N/cm <sup>2</sup>	Tipo de lubricación en función de la velocidad
0,05 - 0,5	4500	manual
0,51 - 1,0	3800	manual
1,1 - 2,0	3300	manual
2,1 - 4,0	2750	lubricacion por goteo
4,1 - 7,0	2250	lubricacion por goteo

*Ejemplo: habiendo preseleccionado una cadena 12B-2 Z19 (dp= 115,74 mm) y visionando el área de trabajo de catalogo de Rexnord de una cadena 12B-2 que es de 1,79 cm<sup>2</sup> calculamos la fuerza que tiene que transmitir la cadena bajo estas condiciones:*

ISO Nr.	Paso p		Ancho	Ø rodillo	Ø eje	Ancho de la malla	Altura de la malla	Entreejes de dientes	Longitud del eje	Longitud del eje de cierre	Superficie de trabajo
	Inch	mm	b <sub>1</sub> min. mm	d <sub>1</sub> max. mm	d <sub>2</sub> max. mm	b <sub>2</sub> max. mm	g mm	e mm	a <sub>1</sub> max. mm	a <sub>3</sub> max. mm	A cm <sup>2</sup>
06 B - 2	0,375	9,525	5,72	6,35	3,28	8,53	8,2	10,24	23,8	27,1	0,56
08 B - 2	0,50	12,7	7,75	8,51	4,45	11,3	11,6	13,92	31,0	33,0	1,01
10 B - 2	0,625	15,875	9,65	10,16	5,08	13,28	14,6	16,59	36,2	38,6	1,34
12 B - 2	0,75	19,05	11,68	12,07	5,72	15,62	15,9	19,46	42,2	44,4	1,79

*Potencia real a transmitir 5,5 kw a 300 rpm – Z19 12B-2. La fuerza sobre la cadena es de: 3025 N.*

*La presión en el área de trabajo de la cadena 12B-2 es de: 3025 N/1,79 cm<sup>2</sup>= 1690 N/cm<sup>2</sup>.*

*Según la tabla arriba y para velocidad lineal de la cadena de 1,8 m/s, la presión máxima permisible es de 3300 N/cm<sup>2</sup> con lo que nuestra cadena tiene un buen factor de servicio en lo que respecta a vida útil a desgaste, considerando una cadena correctamente montada, lubricada y con mantenimiento periódico.*

Aparte de la presión en el área del eslabón de una cadena hay algunos factores útiles al momento de decidir una transmisión mecánica en lo que se refiere a la vida útil a desgaste, como se indica a continuación:

- El numero de dientes de un piñón deberá posiblemente ser 17 mínimo para evitar efectos negativos sobre la cadena como vibraciones, velocidades irregulares de la cadena y acentuado del desgaste. De todas maneras no se recomiendan números de dientes superiores a 120 ya que no aportan mejoras sustanciales y el desgaste permisible sobre una cadena baja desde un 3% hasta un 1%.
- El número de dientes deberá ser posiblemente impar, para evitar que entren en contacto siempre los mismos dientes con los mismos eslabones de la cadena. De esta manera el desgaste de piñones y eslabones será mas regular.
- La distancia entre ejes deberá ser posiblemente entre 20 y 80 veces el paso de la cadena, recomendándose entre ejes de 30 a 50 veces el paso de la cadena. Entre ejes menores acentúan el desgaste y reducen el ángulo de contacto de los piñones pequeños.
- Los piñones con menor número de dientes producen mas desgaste en la articulación de la cadena debido al mayor ángulo recorrido por el eslabón para ir de un diente al próximo. Por lo tanto si la relación de transmisión es  $i=1$

ambos piñones causaran el mismo nivel de desgaste, mientras en una relación  $i=2$  el piñón grande producirá un nivel de desgaste inferior al pequeño, en una relación  $i=3$  este efecto es aun mejor. De todas maneras relaciones de transmisión altas provocan la necesidad de entre ejes grandes para que el ángulo de contacto del piñón pequeño sea suficientemente alto para realizar una buena transmisión.

**Nota: estos cálculos son meramente indicativos y presentan un modo simple para seleccionar una cadena de rodillos Rexnord para transmisiones mecánicas. Consulte siempre nuestro departamento técnico para corroborar estas preselecciones.**

## PRESELECCION DE UNA CADENA DE RODILLOS REXNORD COMO CADENA DE TRANSPORTE

Utilizar una cadena como transporte significa que la cadena soporta una carga y por lo tanto la carga de tracción que tiene que realizar dependen de la entidad de la carga y del coeficiente de fricción de la cadena sobre las guías. En la tabla a continuación se indican coeficientes de fricción de rodadura de los rodillos sobre las guías en función del tipo de material y del estado de lubricación de las guías y cadena.

Lubricación	Guía plástico	Guía acero	Coeficiente estático
buena	0,1	0,12	0,2
moderada	0,12	0,14	0,23
baja	0,16	0,18	0,28

*Nota: se recomienda no ser demasiado optimista en la evaluación del coeficiente de fricción ya que en la practica resultan ser superiores a los indicados en tabla debido a efectos no predecibles en fase de calculo.*

*Ejemplo práctico: hay que realizar el transporte de 5 palets de 1000 kg cada uno sobre dos cadenas, los palets tienen dimensiones 1000 x 800 y la longitud de contacto de los palets sobre cada cadena es de 180 mm (3 puntos de 60 mm)*

*Velocidad 0,1 m/s*

*La carga total 5000 kg. El coeficiente fricción de guías de acero con lubricación baja es de 0,14. (consideramos lubricación muy baja para tener en cuenta los efectos de las eventuales suciedades y desalineaciones y efectos no predecibles = 0,18)*

*F tracción cadenas =  $5000 \times 0,18 = 900$  kg*

*Cada cadena deberá soportar una fuerza de tracción de 450 kg – 4500 N*

La tabla a continuación indica las fuerzas de tracción admisibles para las distintas cadenas Rexnord con malla recta, idóneas para el transporte. La tabla indica las capacidades a tracción de las cadenas en función de la velocidad lineal y del tipo de lubricación y mantenimiento que tenga la cadena (una cadena con buena lubricación resiste a presiones en el área de trabajo superiores y por lo tanto fuerzas de tracción superiores)

Fuerza de tracción admisible sobre cadena para transporte (N)						
Tipo de cadena	velocidad cadena hasta 1 m/s			velocidad cadena superior a 1 m/s		
	Buena lubricación	Moderada lubricación	Baja lubricación	Buena lubricación	Moderada lubricación	Baja lubricación
06B-1 GL	1000	780	500	840	650	400
06B-2 GL	2000	1560	1000	1680	1300	800
08B-1 GL	1800	1350	960	1500	1100	750
08B-2 GL	3600	2700	1800	3000	2200	1500
10B-1 GL	2400	1800	1200	2000	1500	1000
10B-2 GL	4800	3600	2400	4000	3000	2000
12B-1 GL	3200	2500	1600	2700	2000	1300
12B-2 GL	6400	5000	3200	5400	4000	2600
16B-1 GL	7500	5900	3800	6300	4800	3100
16B-2 GL	15000	11800	7500	12600	9600	6200
20B-1 GL	10600	8300	5300	9000	6800	4500
24B-1 GL	20000	15800	10000	17000	12900	8500
32B-1 GL	30000	24000	15000	26000	19500	13000

*De la tabla obtenemos que en caso de lubricación de cadena moderada una cadena 12B-2 cumpliría con los requisitos al igual que una cadena 16B-1. Tener en cuenta que la decisión de la idoneidad de una cadena en función del tipo de lubricación y mantenimiento que tenga estamos considerando que el utilizador final va a realizar dichas operaciones.*

La tabla a continuación indica las cargas admisibles sobre los rodillos y deben ser respetados para evitar deformaciones en los rodillos y por lo tanto gripages en la cadena.

Tipo de cadena	Carga admisible sobre cada rodillo (kg)
06B	20
08B	35
10B	45
12B	55
16B	70
20B	90
24B	120
32B	160

*Suponiendo que para nuestra aplicación elegimos dos tramos de cadena 16B-1. El cálculo de la carga sobre los rodillos sería como sigue:*

*1000 kg/2 cadenas= 500 kg de carga sobre cada cadena (carga de 1 palet)*

*Si la longitud de contacto del palet sobre cada cadena es de 180 mm, el número de rodillos que soportan dicha carga es 180/paso cadena = 180/25,4=7 rodillos*

*Carga por rodillos: 500 kg/7= 71,4 kg por rodillo (valor que supera el máximo admisible)*

*Probamos la segunda opción cadena 12B-2*

*Número de rodillos que soportan carga por cadena: 180/19,05=9. Como se trata de cadena doble los rodillos bajo carga son 18 – 500 kg/18= 27,7 kg/rodillo. Cada rodillo de cadena 12B soporta 55 kg por lo tanto la solución de 12B-2 es válida desde el punto de vista de carga de tracción como desde el punto de vista de carga sobre el rodillo.*