Gear Coupling

BKZ Industry

2026

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ABOUT US

BKZ Industry , an ISO 9001 certified company, is mainly engaged in metallurgy, automobile, paper, oil and other industries couplings.

With the experience more than 15 years,we've meticulously built a stable supply system that ensures unwavering product quality control. Our commitment to excellence remains the driving force behind every coupling we produce. Our products are durable, so we provide a contribution to the sustainable use of environmental resources. Product quality, reliability, flexibility and short delivery times are among our strengths.

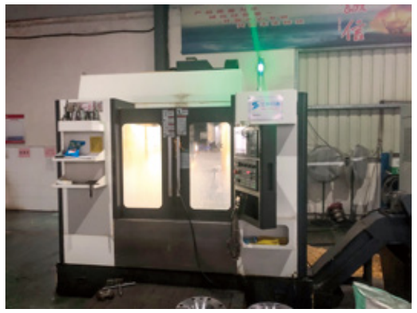
Currently, our main export areas include Australia, Europe, the Middle East, Southeast Asia, and beyond. Our flagship products—SWC universal couplings, drum gear couplings, and customized couplings—are the epitome of precision and durability.

workshop

CNC gear-hobber

CNC lathe

CNC lathe



CNC Machining Center

CNC Machining Center

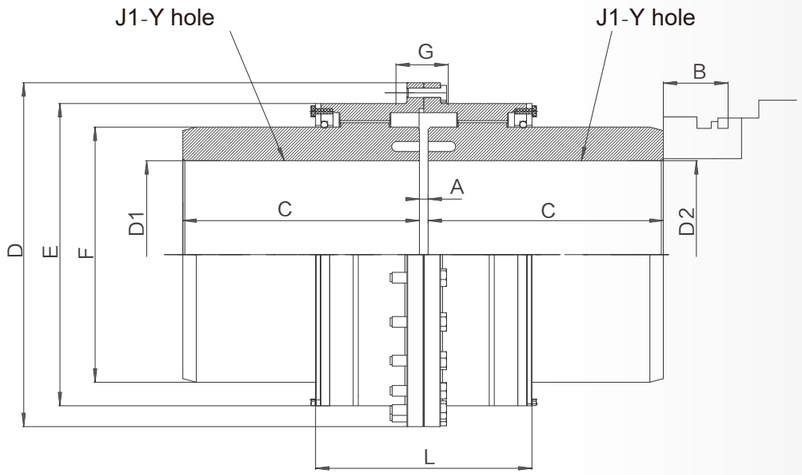
CNC gear-hobber

PRODUCTS(GEAR COUPLING)

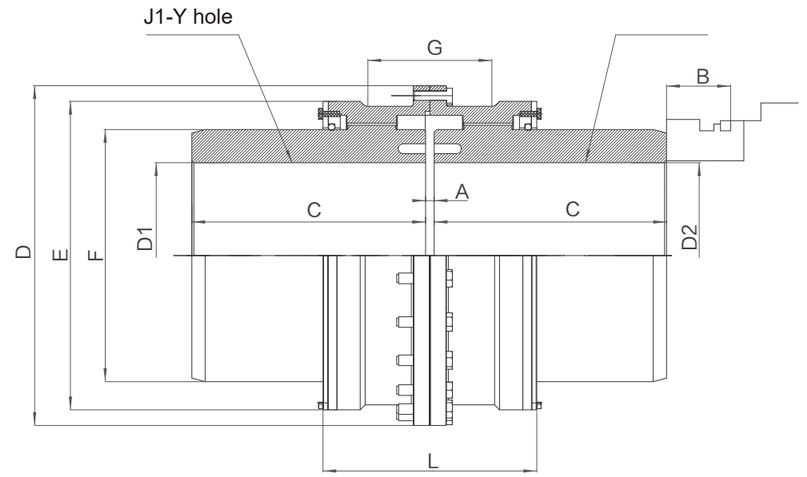
A gear coupling is a mechanical device designed to transmit torque between two shafts that are not collinear.
Gear couplings are characterized by extreme durability. The misalignment compensation is achieved by means of high precision gearing between the coupling hub and outer flange. These transmit torque with low backlash and high torsional stiffness. The geometry of the gearing facilitates a long service life, even without misalignment required. They also compensate for lateral, angular and axial misalignment.
They are made for extensive use in Metal Rolling Mills, Paper Machinery, Cranes, Dredgers, Rubber and Plastic Industries, Cement Plants, Conveyors and Elevators, Compressors, Fans and Blowers, Screens and other general industries.

2 Engineering Data

GIICL-A Type Drum Gear Coupling(see table1)



GIICL-B Type Drum Gear Coupling(see table2)



Parameter and Dimensions of GIICL-A Type Drum Gear Coupling (Table1)

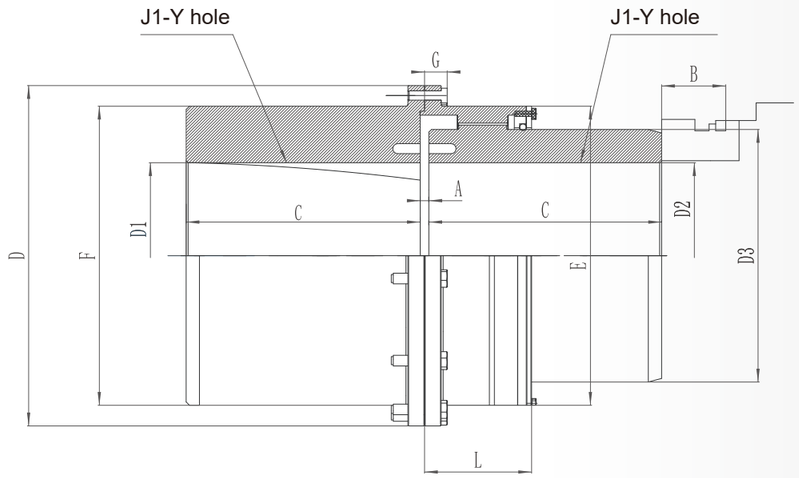
Model	Nominal torque Tm (kn.m)	Permissble speed [n](rpm)	Shaft hole diameter D1,D2	Shaft hole length Y	Shaft hole length J1	D	E	F	G	A	L	B	Grease Lubricant	Weight (kg)
				C										
				mm										
GⅡCL1	0.4	4000	16-35	42-82	38-60	103	71	50	36	8	76	38	51	5.1
GⅡCL2	0.71	4000	20-45	52-112	44-84	115	83	60	42	8	88	42	70	6.7
GⅡCL3	1.12	4000	22-56	52-112	44-84	127	95	75	44	8	90	42	68	9.6
GⅡCL4	1.8	4000	38-65	82-142	60-107	149	116	90	49	8	98	42	87	17.4
GⅡCL5	3.15	4000	40-75	112-142	84-107	167	134	105	55	10	108	42	125	26.6
GⅡCL6	5	4000	45-90	112-172	84-132	187	153	125	56	10	110	42	148	38.7
GⅡCL7	7.1	3750	50-100	112-212	84-167	204	170	140	60	10	118	42	175	58.2
GⅡCL8	10	3300	55-110	112-212	84-167	230	186	155	67	12	142	47	268	73.6
GⅡCL9	16	3000	60-130	142-252	107-202	256	212	180	69	12	146	47	310	117
GⅡCL10	22.4	2650	65-150	142-252	107-202	287	239	200	78	14	164	47	472	144
GⅡCL11	35.5	2350	70-170	142-302	107-242	325	276	235	81	14	170	47	550	300
GⅡCL12	50	2100	75-200	142-352	107-282	362	313	270	89	16	190	49	695	348
GⅡCL13	71	1850	150-220	252-352	202-282	412	350	300	98	18	208	49	1019	440

Parameter and Dimensions of GIICL-B Type Drum Gear Coupling (Table2)

Model	Nominal torque Tm (kn.m)	Permissble speed [n](rpm)	Shaft hole diameter D1,D2	Shaft hole length Y	Shaft hole length J1	D	E	F	G	A	L	B	Grease Lubricant	Weight (kg)
				C										
				mm										
GⅡCL14	112	1650	170-250	302-410	242-330	462	418	335	172	22	296	63	3900	682
GⅡCL15	180	1500	190-280	352-470	282-380	512	465	380	182	22	316	63	3700	977
GⅡCL16	250	1300	220-320	352-470	282-380	580	522	430	209	28	354	67	4500	1828
GⅡCL17	355	1200	250-360	410-550	330-450	644	582	490	198	28	364	67	4900	2676
GⅡCL18	500	1050	280-400	470-650	380-540	726	654	540	222	28	430	75	7000	3560
GⅡCL19	710	950	300-460	470-650	380-540	818	748	630	232	32	440	75	8900	4975
GⅡCL20	1000	800	360-530	550-800	450-680	928	832	720	247	32	470	75	111000	7159
GⅡCL21	1400	750	400-600	650-800	540-680	1022	924	810	255	40	490	75	13000	8448
GⅡCL22	1800	650	450-670	650-900	540-780	1134	1028	915	262	40	510	75	16000	1340
GⅡCL23	2500	600	530-750	800-900	680-780	1282	1174	1030	299	50	580	80	28000	1340
GⅡCL24	3550	550	560-850	800-1000	680-880	1428	1320	1175	317	50	610	80	33000	1883
GⅡCL25	4500	460	670-1000	900-1000	780-1000	1644	1538	1390	325	50	620	80	43000	2779

2 Engineering Data

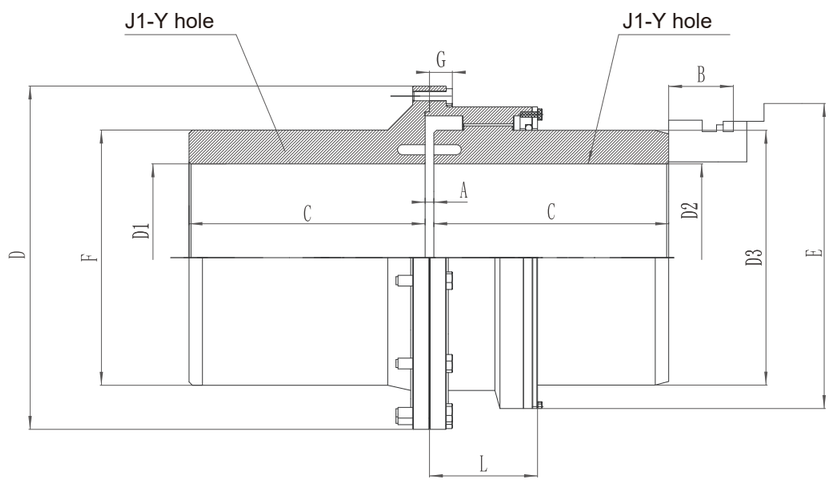
GIICLZ-A Type Drum Gear Coupling(see table3)



Parameter and Dimensionsof GIICLZ-A Type Drum Gear Coupling (Table3)

Model	Nominal torque Tm (kn.m)	Permissble speed [n](rpm)	Shaft hole diameter D1,D2	Shaft hole length Y	Shaft hole length J1	D	D3	F	G	A	L	E	B	Grease Lubricant	Weight (kg)
				C	C										
				mm	mm										
GⅡCLZ1	0.4	4000	16-35	42-112	38-84	103	50	71	8	8	38	71	38	31	7
GⅡCLZ2	0.71	4000	20-45	52-142	44-107	115	60	83	8	8	45	83	42	42	7
GⅡCLZ3	1.12	4000	22-56	52-142	44-107	127	75	95	8	8	45	95	42	42	11
GⅡCLZ4	1.8	4000	38-65	82-172	60-132	149	90	116	8	8	49	116	42	53	18
GⅡCLZ5	3.15	4000	40-75	112-172	84-132	167	105	134	10	10	54	134	42	77	28
GⅡCLZ6	5	4000	45-90	112-212	84-167	187	125	153	10	10	55	153	42	91	39
GⅡCLZ7	7.1	3750	50-100	112-212	84-167	204	140	170	10	10	59	170	42	108	58
GⅡCLZ8	10	3300	55-110	112-212	84-167	230	155	186	12	12	71	186	47	161	74
GⅡCLZ9	16	3000	60-130	142-252	107-202	256	180	212	12	12	73	212	47	184	116
GⅡCLZ10	22.4	2650	65-150	142-252	107-202	287	200	239	14	14	82	239	47	276	144
GⅡCLZ11	35.5	2350	110-170	212-302	167-242	325	235	250	14	14	85	276	47	322	230
GⅡCLZ12	50	2100	130-200	252-352	202-282	362	270	286	16	16	95	313	49	404	348
GⅡCLZ13	71	1850	150-220	252-352	202-282	412	300	322	18	18	104	350	49	585	438

GIICLZ-B Type Drum Gear Coupling(see table4)

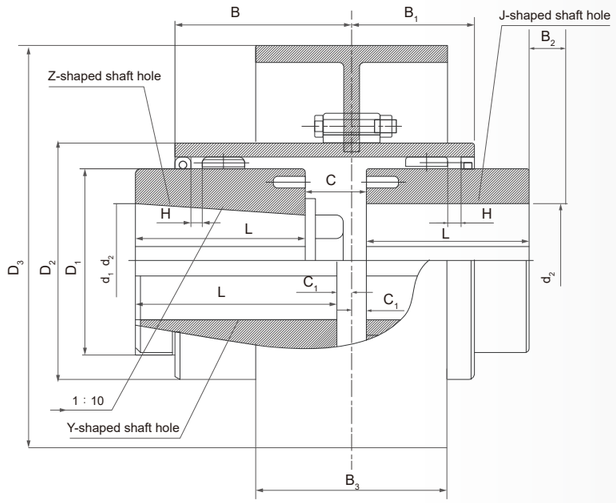


Parameter and Dimensionsof GIICLZ-B Type Drum Gear Coupling (Table4)

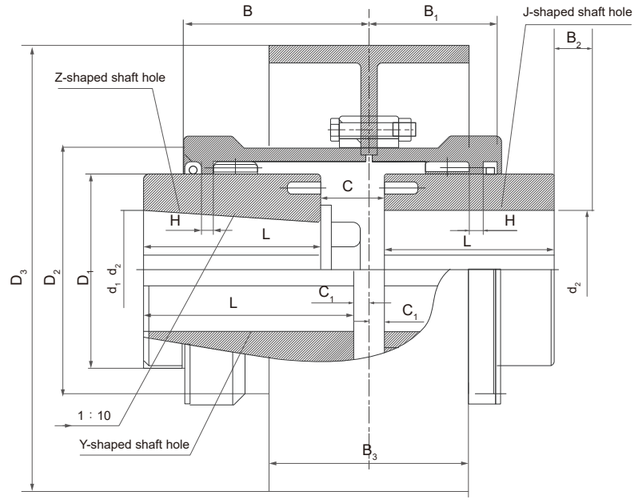
Model	Nominal torque Tm (kn.m)	Permissble speed [n](rpm)	Shaft hole diameter D1,D2	Shaft hole length Y	Shaft hole length J1	D	D3	F	G	A	L	E	B	Grease Lubricant	Weight (kg)
				C	C										
				mm	mm										
GⅡCLZ14	112	1650	170-250	302-410	242-330	462	-	420	22	22	148	335	63	1600	655
GⅡCLZ15	180	1500	190-280	352-470	282-380	512	-	465	22	22	158	380	63	2100	946
GⅡCLZ16	250	1300	220-320	352-470	282-380	580	-	522	28	28	177	430	67	2500	1232
GⅡCLZ17	355	1200	250-360	410-550	330-450	644	-	582	28	28	182	490	67	2700	1828
GⅡCLZ18	500	1050	280-400	470-650	380-540	726	-	658	28	28	215	540	75	3900	2674
GⅡCLZ19	710	950	300-460	470-650	380-540	818	-	748	32	32	220	630	75	5000	3565
GⅡCLZ20	1000	800	360-530	550-800	450-680	928	-	838	32	32	235	720	75	6200	5198
GⅡCLZ21	1400	750	400-600	650-800	540-680	1022	-	928	40	40	245	810	75	7000	7124
GⅡCLZ22	1800	650	450-670	650-900	540-780	1134	-	1036	40	40	255	915	75	8700	8978
GⅡCLZ23	2500	600	530-750	800-900	680-780	1282	-	1178	50	50	290	1030	80	15000	13124
GⅡCLZ24	3550	550	560-850	800-1000	680-880	1428	-	1322	50	50	305	1175	80	18000	18659
GⅡCLZ25	4500	460	670-1000	900-1000	780-1000	1644	-	1538	50	50	310	1390	80	23000	27797

2 Engineering Data

NGCL-A Type Drum Gear Coupling(see table5)



NGCL-B Type Drum Gear Coupling(see table6)



Parameter and Dimensionsof NGCL-A Type Drum Gear Coupling (Table5)

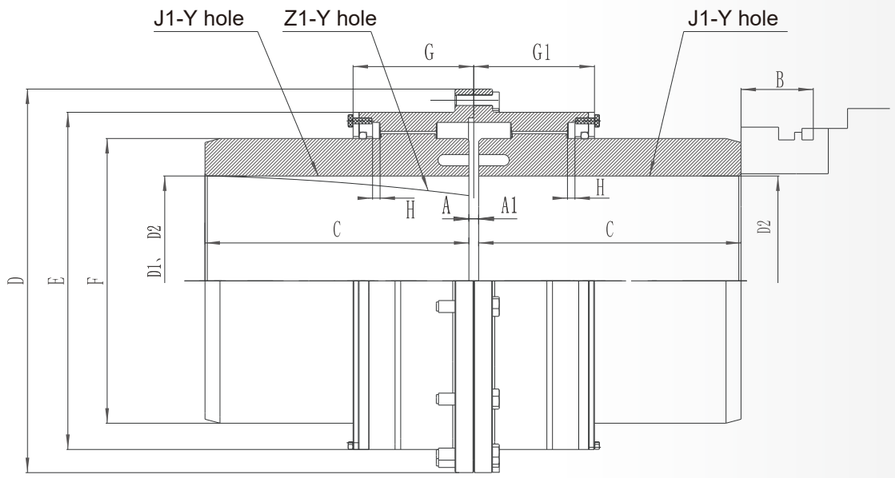
Model	Nominal torque Tm (KN.m)	Permissible speed [n](rpm)	Shaft hole diameter d_1,d_2	Shaft hole length		D	D1	D2	D3	C	C1	H	B	B1	B2	B3	Grease Lubricant	Weight (kg)
				Y	J1Z1													
				L														
				mm														
NGCL1	335	4000	20-35	52-82	38-60	103	71	50	160	30	8	2	56	42	38	68	51	8
NGCL2	630	4000	25-45	62-112	44-84	115	83	60	160	36	8	2	68	48	42	68	70	11
NGCL3	0	3800	30-35	62-112	44-84	127	95	75	200	41	8	2	70	49	42	85	107	17
NGCL4	1600	3800	40-65	82-142	60-107	149	116	90	200	41	8	2	74	53	42	85	137	23.8
NGCL5	2800	3000	45-75	112-142	84-107	167	134	105	250	48	8	2.5	84	58	42	105	201	34.4
NGCL6	4500	3000	50-90	112-172	84-132	187	153	125	250	49	9	2.5	85	59	42	105	238	47.6
NGCL7	6300	2400	60-100	112-212	84-167	204	170	140	315 300	53	9	2.5	93	63	42	132	298	71.1
NGCL8	9000	190	70-110	112-212	84-167	230	186	155	400	64	12	3	112	77	47	168	465	108
NGCL9	14000	1500	80-130	142-252	107-202	256	212	180	500	71	13	3	119	80	47	210	561	167
NGCL10	20000	1200	80-150	142-252	107-202	287	239	200	630 600	75	15	3.5	120	90	47	265	734	237
NGCL11	31500	1050	100-170	142-302	107-242	325	276	235	710 700	77	16	3.5	134	94	47	298	956	357
NGCL12	45000	1050	100-200	142-352	107-282	362	313	270	710 700	84	17	4	164	104	49	298	1320	464
NGCL13	63000	950	150-220	252-352	202-282	412	350	300	800	88	18	4.5	165	113	49	335	1600	596

Parameter and Dimensionsof NGCL-B Type Drum Gear Coupling (Table6)

Model	Nominal torque Tm (KN.m)	Permissible speed [n](rpm)	Shaft hole diameter d_1,d_2	Shaft hole length		D	D1	D2	D3	C	C1	H	B	B1	B2	B3	Grease Lubricant	Weight (kg)
				Y	J1Z1													
				L														
				mm														
NGCL14	100000	950	170-220	302-410	242-330	462	420	335	800	92	20	5.5	209	157	63	335	3500	850

2 Engineering Data

GCLD Type Drum Gear Coupling(see table7)



Parameter and Dimensionsof GCLD Type Drum Teeth Coupling (Table7)

Model	Nominal torque Tm (kn.m)	Permissble speed [n](rpm)	Shaft hole diameter D_1,D_2	Shaft hole length		D	E	F	G	A	B	Grease Lubricant	Weight (kg)
				Y	J1								
				C									
				mm									
GCLD1	1000	4000	16-35	52-112	38-84	127	95	75	66	27	42	107	9.6
GCLD2	1600	4000	20-45	82-142	60-107	149	116	90	70	26.5	42	137	16.4
GCLD3	2800	4000	22-56	112-142	84-107	167	134	105	80	33	42	201	22.4
GCLD4	4500	4000	38-65	112-172	84-132	137	153	125	81	33.5	42	238	35.6
GCLD5	6300	3750	40-75	112-212	84-107	204	170	140	89	37.5	42	298	53.9
GCLD6	9000	3300	45-90	112-212	84-167	230	186	155	106	43.5	47	465	67.5
GCLD7	14000	3000	50-100	142-252	107-202	256	212	180	112	48	47	561	106.7
GCLD8	20000	2650	50-100	142-252	107-202	287	239	200	112	40.5	47	734	123
GCLD9	9000	2350	60-130	142-302	107-242	325	276	235	125	49.5	47	956	212
GCLD10	31500	2100	60-150	142-352	107-282	362	3	270	149	65	49	1320	319

Calculation Formula

1. Bending Critical Speed

Roughly calculate the critical bending speed of the intermediate shaft, intermediate sleeve and outer gear ring and inner gear ring.

$$n_k = 300 \cdot \sqrt{\frac{78.3 \cdot E \cdot I_{axial}}{G1 \cdot l_0^4}}$$

n_k = critical bending speed, rpm
n = working speed, rpm
E = modulus of elasticity = 20.6 104 N/mm2
G_1 = weight per 1 mm length, kg/mm (see Article 5)
L_0 = tooth center distance, mm
I_{axial} = (see Article 4)

Allowed subcritical operation
$n \le 0.75 \cdot nk$
Operation above the threshold
$n \ge 1.35 \cdot nk$

2. Tension rigidity C_{T2}

$$C_{T2} = \frac{I_{pol} \cdot G}{L \cdot 1000}$$

C_{T2} = Tension rigidity of the intermediate shaft Nm/rad
G = Shear modulus = 7.95 104 N/mm2
L = the length of the intermediate shaft, mm
L = L-2 · D
I_{pol} = (Refer to Article 4)

3. Moment of inertia J

Used to calculate the axis:

$$J = \frac{G_2 \cdot d^2}{8 \cdot 10^6}$$

Used to calculate the middle sleeve (tube):

$$J = \frac{G_2 \cdot (d_a^2 + d_i^2)}{8 \cdot 10^6}$$

J = moment of inertia, kgm^2
G_2 = weight, kg (Refer to Article 5)
d = shaft diameter, mm
d_a = outer diameter of middle sleeve, mm
d_i = outer diameter of middle sleeve, mm

4. Geometrical moment of inertia I

Used to calculate the axis:

$$I_{axial} = \frac{d^4}{20.37}$$

Used to calculate the middle sleeve (tube):

$$I_{axial} = \frac{d_a^4 - d_i^4}{20.37}$$

I_{axial} = Axial geometric moment of inertia, mm4
d = shaft diameter, mm
d_a = outer diameter of middle sleeve, mm
d_i = inner diameter of middle sleeve, mm
I_{pol} = polar geometric moment of inertia, mm4
$I_{pol} = 2 \cdot I_{axial}$

5. Weight G_2

Used to calculate the axis:

$$G_2 = \frac{d^2 \cdot 6.165 \cdot L}{10^6}$$

Used to calculate the middle sleeve (tube):

$$G_2 = \frac{(d_a^2 - d_i^2) \cdot 6.165 \cdot L}{10^6}$$

G_2 = weight, kg (Refer to Article 5)
d = shaft diameter, mm
d_a = outer diameter of middle sleeve, mm
d_i = inner diameter of middle sleeve, mm
L = length, mm
G_1 = weight per 1 mm length kg/mm

$$G_1 = \frac{G_2}{L}$$

6. Peripheral speed

$$V = \frac{d \cdot n}{19100}$$

V = peripheral speed, m/s
d = brake disc diameter, mm
n = working speed, rpm

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