

WIRE DRUM COUPLING

WDKU-N
KWN 22150



KUDOSWORLD CORPORATION

Website: www.kwdcoupling.com

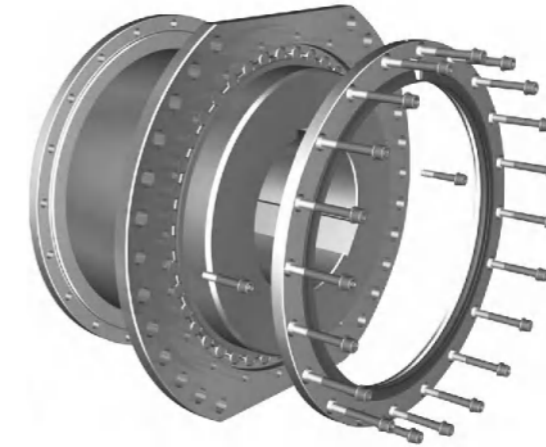
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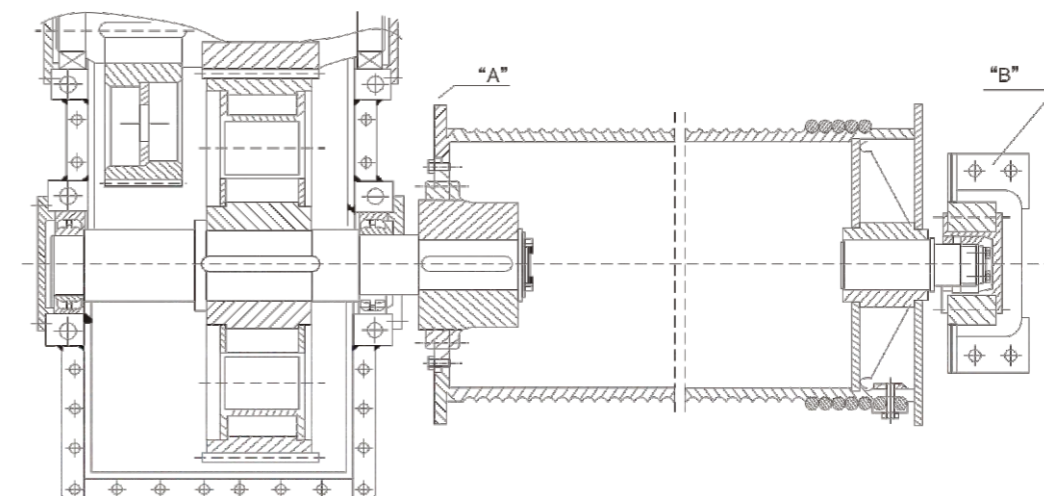
**Product | Engineering Services
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Wire Drum Coupling



Distinctive Features

1. The Drum coupling is designed for installation in drum drive of crane and conveying system. The drum coupling can be used in very difficult and rough operating conditions of iron and steel work and continuous heavy load operation in shore cranes.
2. With compact design and capacity of transmitting large radial load, enjoy longer life and minimum loss of power. Angular misalignment can be allowed up to $\pm 1.5^\circ$.
3. According to the size of couplings, max $\pm 3 \sim \pm 8\text{mm}$ of end float can be absorbed. Drum couplings are not suitable for transmitting axial forces.
4. With the design of decreasing slip movement of roller, backlash between crowned rollers and cylindrical bores, the relative movement between rollers and bores, which is caused by wear, are considerably reduced due to the natural movement of drum.
5. In the transmission of power, a stamping hardness of the roller profile is produced, with which higher wear resistance is achieved.



Application

1. The Drum coupling is suitable for crane and hoisting construction to couple wire drum and reducer gear box, especially suitable for the heavy and difficult operating condition of iron and steel works.
2. When the gear shaft is connected to hoisting drum with single or twin drive, three or four point mounting is required for a crane unit. Fig 1 and 2 show the arrangement of a drum drive of a crane assembly. These types of connection.
3. In the event of misalignment, which may occur due to inaccurate assembly, considerable additional forces become effective on the shaft. In this case bending stress at the drum shaft occurs during rotation, which can cause bearing and roller damage.
4. In case of a single drum drive with rigid connection of gear shaft and drum, (see Fig.3) a given load F and bending or alignment error will produce a max Bending moment at the end of the gear shaft and of M .
5. If bearing is used instead of rigid connection, a joint must be fitted. In this case max bending moment at the end of the gear shaft with the same load F is only 25% of M .
6. The coupling hub of the drum coupling is assembled to the output shaft of reducer gear. The pedestal seat of drum can be designed as a bearing.

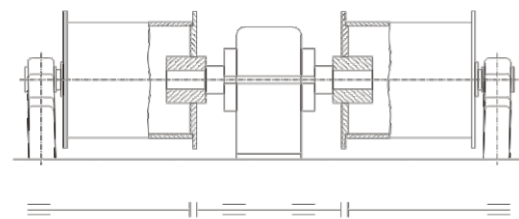


Fig.1 Diagram of a twin-drum drive without built-in joint

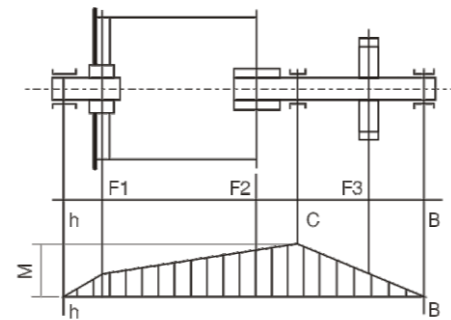


Fig.3

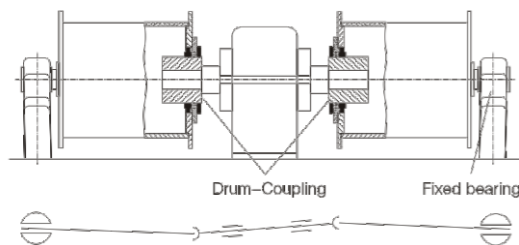


Fig.2 Diagram of a twin-drum drive with built-in joint

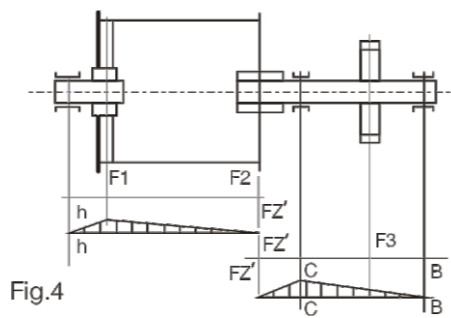
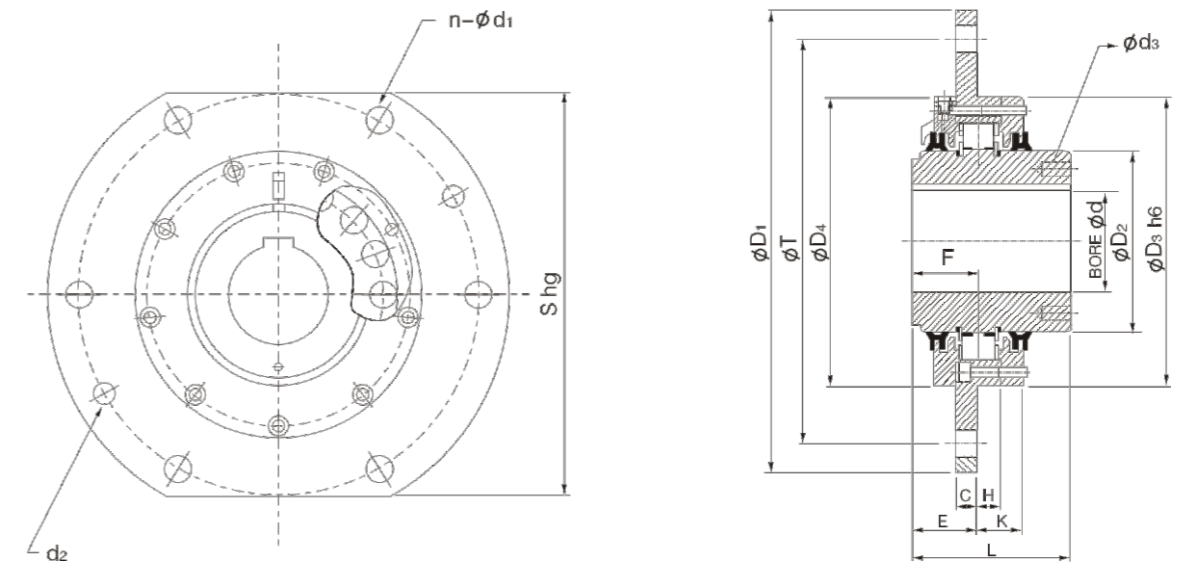


Fig.4

Dimensions

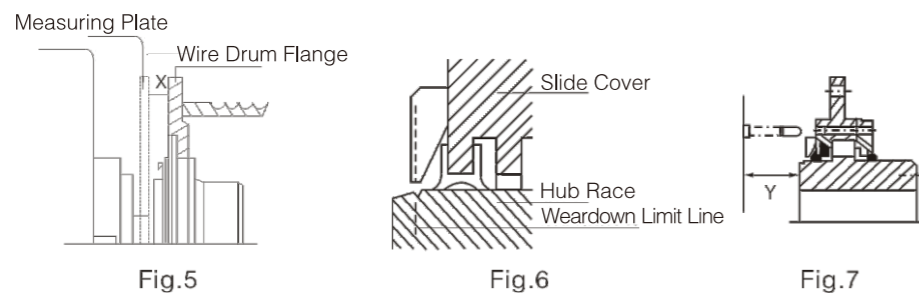


Size	Torque Max (kgf · m)	Radial Load Max (kgf)	Bore d		Dimensions														Axial Play Max (mm)	Weight (kg)	GD ² (kgf · m ²)		
			Min	Max	D1	L	D2	D3	D4	S	E	F	C	H	K	d3	T	n				d1	d2
D0.25	663	1784	40	65	250	95	95	160	159	220	42	44	12	16	31	-	220	6	15	M12	3	10.5	0.06
D0.5	815	2039	50	75	280	100	110	180	179	250	42	44	12	16	31	-	250	6	15	M12	3	13	0.09
D0.75	968	2192	60	85	320	110	125	200	199	280	45	46	15	17	32	-	280	6	19	M16	4	18.5	0.16
D1	1631	2752	60	95	340	125	140	220	219	300	45	46	15	17	32	-	300	6	19	M16	4	23	0.22
D1.3	2124	3772	80	110	360	130	160	240	239	320	45	47	15	19	34	-	320	6	19	M16	4	27.5	0.30
D1.6	2650	4179	80	125	380	145	180	260	259	340	45	47	15	19	34	-	340	6	19	M16	4	33	0.40
D2	3058	4587	100	140	400	170	195	280	279	360	45	48	15	22	32	M16	360	6	19	M16	4	44	0.58
D3	4179	5403	100	155	420	175	215	310	309	380	45	50	15	22	33	M16	380	6	19	M16	4	53	0.80
D4	5505	7645	100	180	450	185	255	340	339	400	60	61	20	22	31	M20	400	6	24	M20	4	70	1.33
D6	12232	13252	120	215	550	240	305	420	419	500	60	65	20	30	45	M20	500	6	24	M20	6	131	3.6
D10	18349	15291	140	245	580	260	345	450	449	530	60	67	20	30	16	M24	530	8	24	M20	6	164	5.2
D15	24465	18349	160	290	650	315	433	530	529	580	65	69	25	30	43	M24	500	8	24	M20	6	260	10.9
D26	41794	32110	170	310	680	350	470	560	559	600	65	78	25	35	63	M30	630	24	24	M20	6	340	15.8
D34	53007	36679	200	330	710	380	502	600	599	640	81	88	35	38	59	M30	660	24	28	M24	8	415	22.2
D42	66259	40775	230	370	780	410	566	670	669	700	81	88	35	38	59	M30	730	24	28	M24	8	560	36.8
D62	78491	48420	260	420	850	450	630	730	729	760	81	90	35	40	61	M30	800	24	28	M24	8	720	57.69

Installation

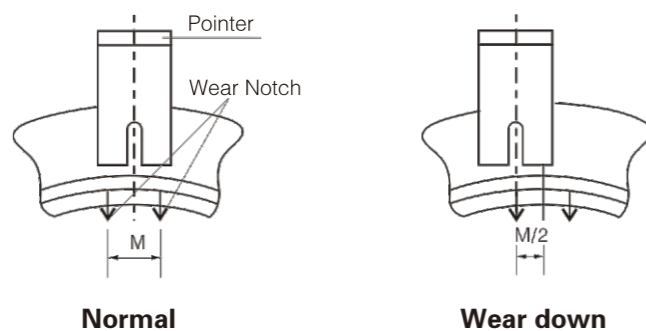
- Before fixing the drum, line alignment must be done and the largest difference between the measured values at any two points may not exceed the following dimension.
Drum diameter 1,000mm or smaller: 0.5mm
Drum diameter 1,000mm or larger: 0.8mm
- During installation, care must be taken to ensure that the indicator and markings on the teeth crown must be in their correct position.
- Before drilling the holes for fixing the drum bearing in the bridge, the articulated joint being installed must be adjusted along the axis.
- Should there be enough space available to insert the bolts for the retention of outer cover, then these bolts must be introduced into the holes of cover before sliding the housing and hub into place.
- Make sure there is enough mounting space to insert the retaining nut into the through-hole of the housing before the coupling housing and hub are moved. According to fig.7, the outer cover shall be installed with bolts in the space as shown in the table below. If the bolts cannot be installed with the outer cover in advance, it shall be installed with bolts in the outer cover.

Size	D0.25 ~ D0.5	D0.75 ~ D3	D4 ~ D10	D15	D26 ~ D62
y	50	55	70	80	90

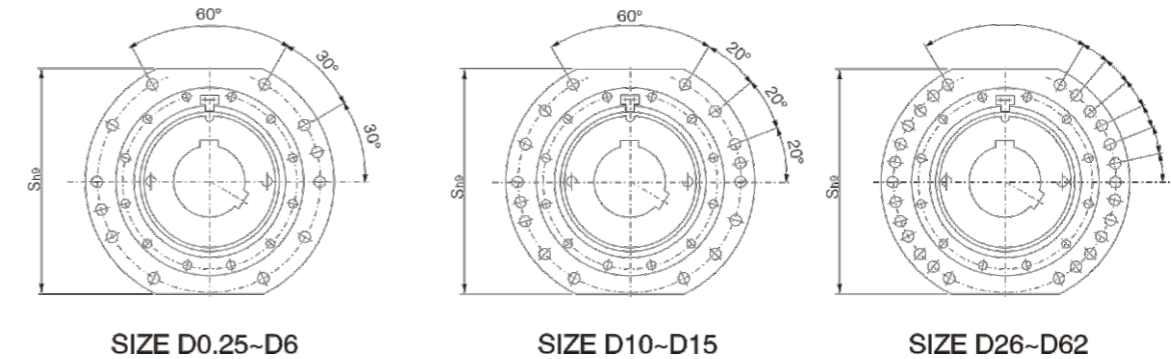


- At least once a year, following points must be checked:
 - Tightness of screws.
 - Wear status: if max wear occurs, change the unit.
 - Check angular misalignment.

Coupling Size	D0.25	D0.5	D0.75	D1	D1.3	D1.6	D2	D3	D4	D6	D10	D15	D26	D34	D42	D62	
max. permissible wear M / 2	4			6						8							

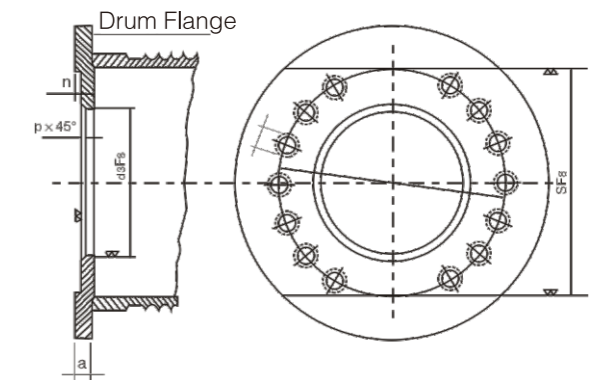


Flange Holes



Cable Drum Flange Coupling Side

Size	D	T	S F8	a min.	d ₁	d ₂	d ₃ F8	p	n min.
D0.25	250	220	220	25	15	M12	160	3	10
D0.5	280	250	250				180		
D0.75	320	280	280				200		
D1	340	300	300	30	19	M16	220	20	
D1.3	360	320	320				240		
D1.6	380	340	340				260		
D2	400	360	360				280		
D3	420	380	380				310		
D4	450	400	400	40	24	M20	340	25	
D6	550	500	500				420		
D10	580	530	530				450		
D15	650	600	580	50			530	35	
D26	680	630	600				560		
D34	710	660	640	60	28	M24	600	40	
D42	780	730	700				670		
D62	850	800	760				730		
D82	940	875	830	70	28	M24	800	5	
D92	1025	945	900				860		



Lubrication and Maintenance

- After installation of the coupling into the drum, the lubrication pipe is connected to the lubrication hole. Full up lub-oil must be done before completion of assembly and grease must be forced in until lubricant flows out of the overflow hole.
- Operating temperature of grease are $-17^{\circ}\text{C} \sim 70^{\circ}\text{C}$. The lubrication periods vary according to the types of drive.

