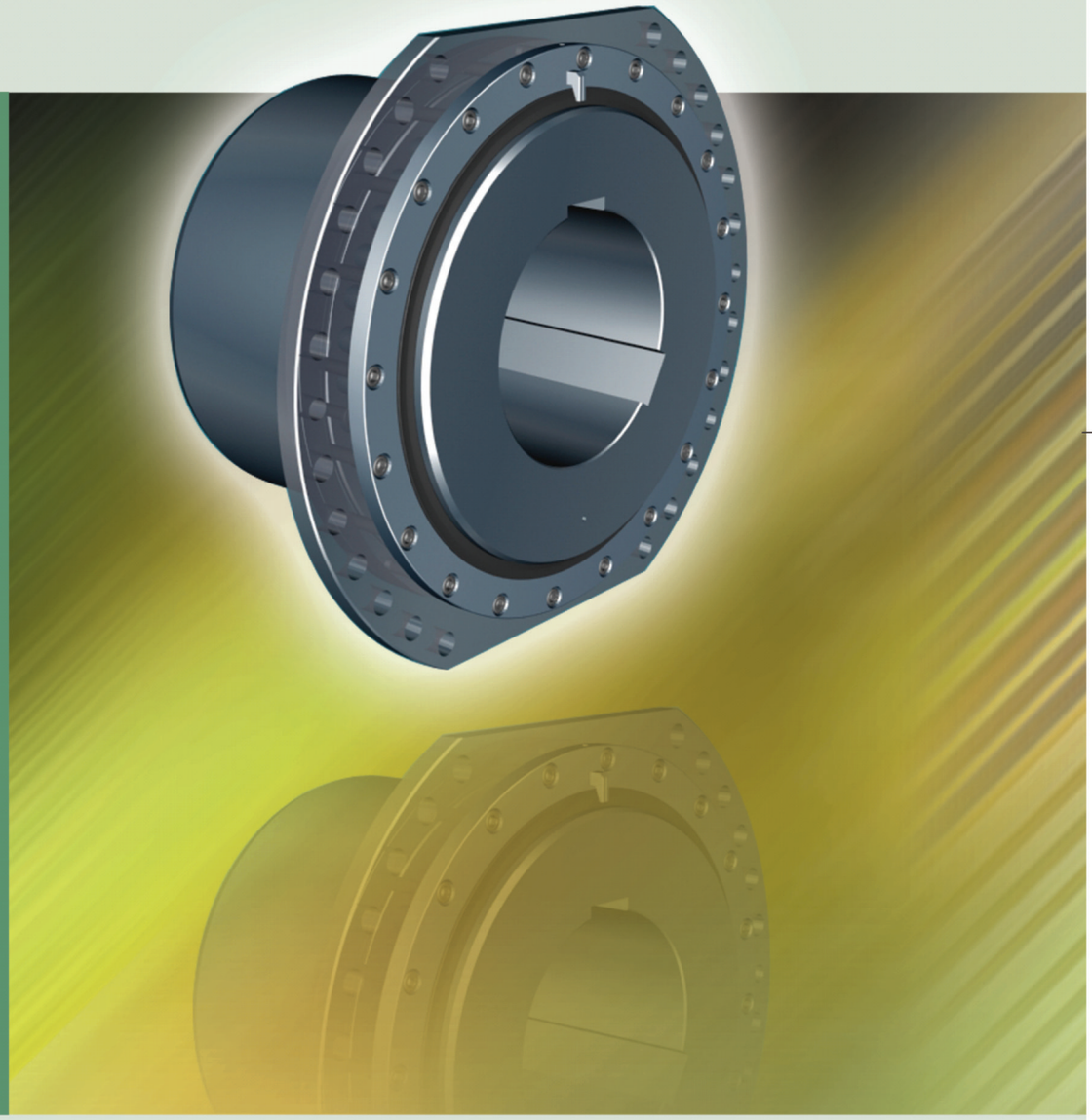
WIRE DRUM

COUPLING

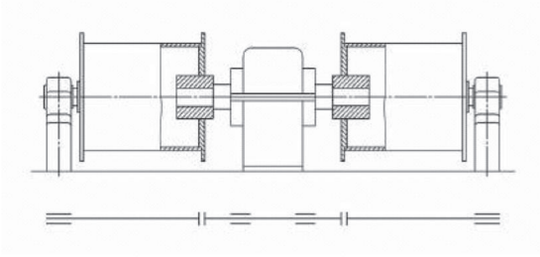


WIRE DRUM COUPLING

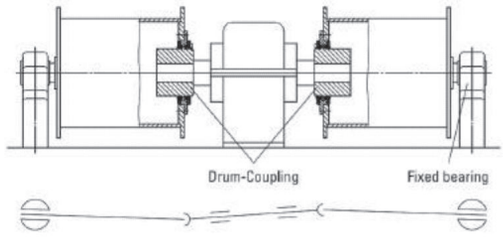
FEATURE

The wire drum coupling can transfer a very large radial load and rotational torque to use appropriate at the crane and conveyor systems especially. Here is the feature of the wire drum coupling.

1. The two figures are shown below the arrangement of twin-drum drives for a crane unit. By installing wire drum coupling, the bending moments of Fig.2 only account for 24% compared to Fig 1 which is the rigid connection of twin drum drives.
2. Angular misalignment can be allowed up to ±1.5°.
3. It is not suitable for the absorption and transmission of axial forces, but it can allow ±3mm~±8mm of axial displacements in operation.
4. Sliding movement in the gearing is kept to a minimum using the cylindrical tooths and crown rollers for compensation of angular misalignment. The wear intensifying relative movement between hub and sleeve is reduced by the natural movement of the drum itself.



(Fig. 1) The layout of a twin-drum drive with a four-point bore rigid shaft without a wire drum coupling



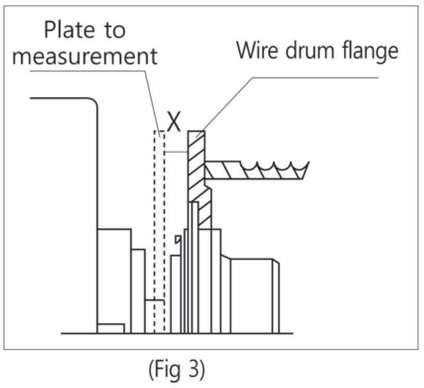
(Fig. 2) The layout of a twin-drum drive with a wire drum coupling

INSTALLATION

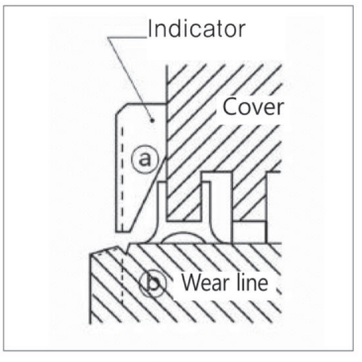
1. The Axial shaft should be aligned before fixing the wire drum. Please measure the dimension refer to the (Fig. 3), the measured values may not exceed the following dimension below.
2. The measured values ("X") are 0.5mm when the drum diameter is under 1,000 and 0.8mm if the drum diameter is over 1,000mm.
3. The indicator and wear limit has to match with the same direction during the install and assemble as shown (Fig. 6).
4. And the coupling has to be fixed after the coupling adjusted the axis direction to bring ⓐ to match ⓑ as shown (Fig. 4).
5. To assemble the outer cover, it needs to have enough space ("Y") to fasten the bolts as following (Fig.5). The values are (Table 1).

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

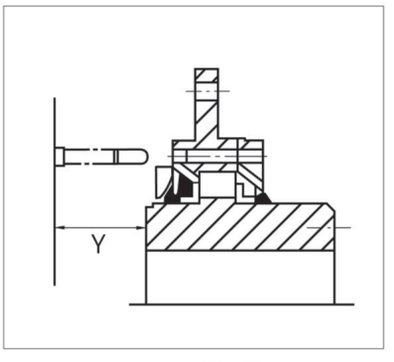
(Table 1)



(Fig 3)



(Fig 4)



(Fig 5)

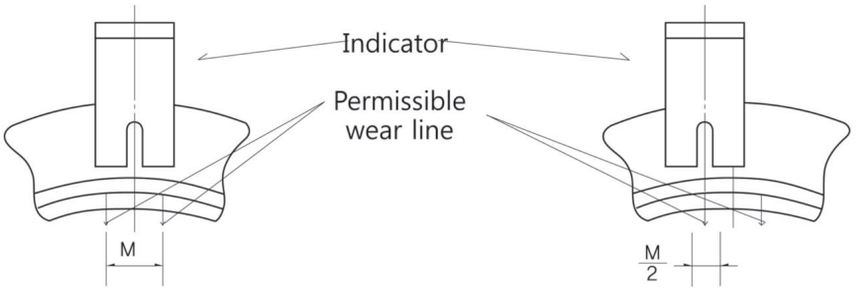
6. Wear

a. The wear has to be checked every year. It has to be replaced if there is the wear as following (Fig. 7) and (Table 2). And if the indicator changes the direction as shown (Fig. 7), you can easy to check the maximum wear without disassembling it.

b. The maximum permissible wear is ($\frac{M}{2}$) as shown (Table 2). It has to be replaced if the wear is over the ($\frac{M}{2}$).

Size	D0.25	D0.05	D0.75	D1	D1.3	D1.6	D2	D3	D4	D6	D10	D15	D26	D34	D42	D62
Max. pemissible Wear (M/2)	4				6					8						

(Table 2)



(Fig 6)

(Fig 7)

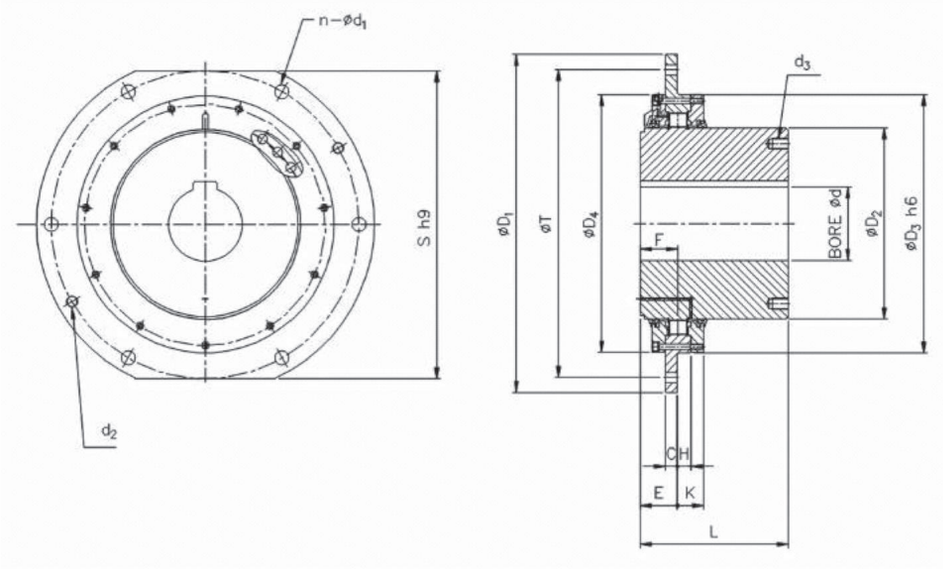
7. Fastening bolt and tigtening torque

It needs the torque wrench to fasten and to use the strength classification 8.8. The tightening torque will be as follow (Table 3).

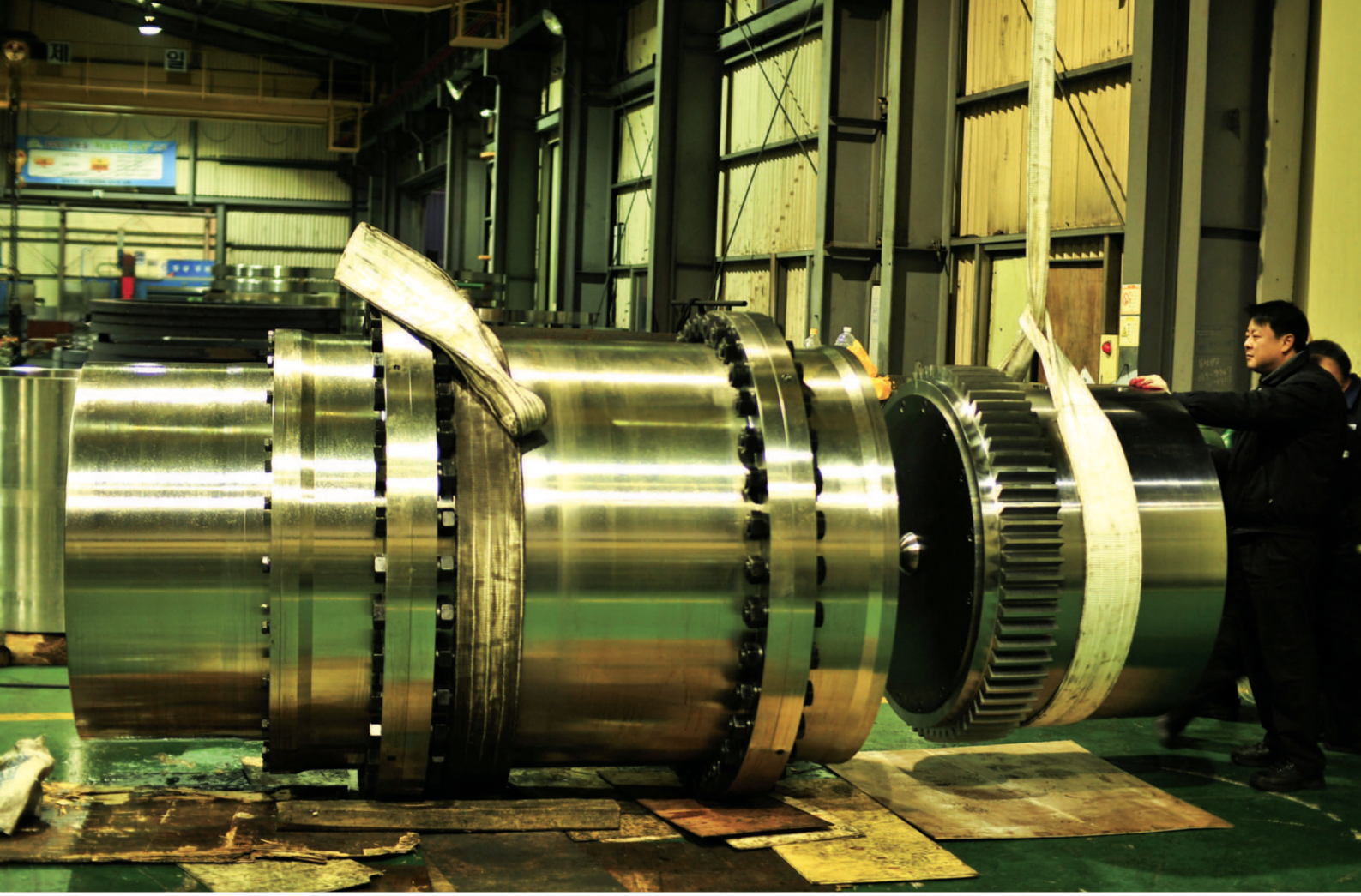
(Table 3)

Bolt	M8	M10	M12	M16	M20	M24
Tigtening torque (Nm)	26.5	51	98	216	421	725

DIMENSION



Size	Torque Rating (kgf • m)	Radial Load Max. (kgf)	Bore (ød) max.	Dimension(mm) D1	L	D2	D3	D4	S	E	F	C	H	K	d3	T	n	d1	d2	Axial play max (±mm)	Weight (kg)	GD² (kgf • ㎡)
D0.25	459	1,480	65	250	95	95	160	159	220	42	44	12	16	31		220	6	15	M12	3	10.5	0.24
D0.5	612	1,680	75	280	100	110	180	179	250	42	44	12	16	31		250	6	15	M12	3	13.0	0.50
D0.75	765	1,890	85	320	110	125	200	199	280	45	46	15	17	32		280	6	19	M16	4	18.5	0.66
D1	918	2,000	95	340	125	140	220	219	300	45	46	15	17	32		300	6	19	M16	4	23.0	1.13
D1.3	1,581	3,200	105	360	130	160	240	239	320	45	47	15	19	34		320	6	19	M16	4	27.5	1.42
D1.6	1,990	3,570	120	380	145	180	260	259	340	45	47	15	19	34		340	6	19	M16	4	33.0	1.90
D2	2,450	3,900	135	400	170	200	280	279	360	45	47	15	19	34	M16	360	6	19	M16	4	44.0	2.65
D3	2,860	4,280	145	420	175	220	310	309	380	45	47	15	19	34	M16	380	6	19	M16	4	53.0	3.70
D4	3,870	5,000	175	450	185	260	340	339	400	60	61	20	22	40	M20	400	6	24	M20	4	70.0	5.80
D6	7,140	11,700	205	550	240	310	420	419	500	60	61	20	22	42	M20	500	6	24	M20	6	131.0	15.70
D10	12,200	12,800	230	580	260	350	450	449	530	60	61	20	22	42	M24	530	8	24	M20	6	164.0	22.50
D15	18,400	15,000	280	650	315	415	530	529	580	65	66	25	27	47	M24	600	8	24	M20	6	260.0	43.90
D26	31,600	25,500	300	680	350	445	560	559	600	65	70	25	34	54	M30	630	24	24	M20	6	340.0	63.40
D34	40,800	30,600	315	710	380	475	600	599	640	81	83	35	34	56	M30	660	24	28	M24	8	415.0	79.80
D42	51,000	34,700	355	780	410	535	670	669	700	81	83	35	34	56	M30	730	24	28	M24	8	560.0	138.00
D62	70,000	39,000	400	850	450	600	730	729	760	81	85	35	34	64	M30	800	24	28	M24	8	720.0	208.00
D82	94,800	53,500	450	940	450	660	800	790	830	86	85.5	40	38	62	M30	875	30	28	M24	10	1000.0	380.00



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