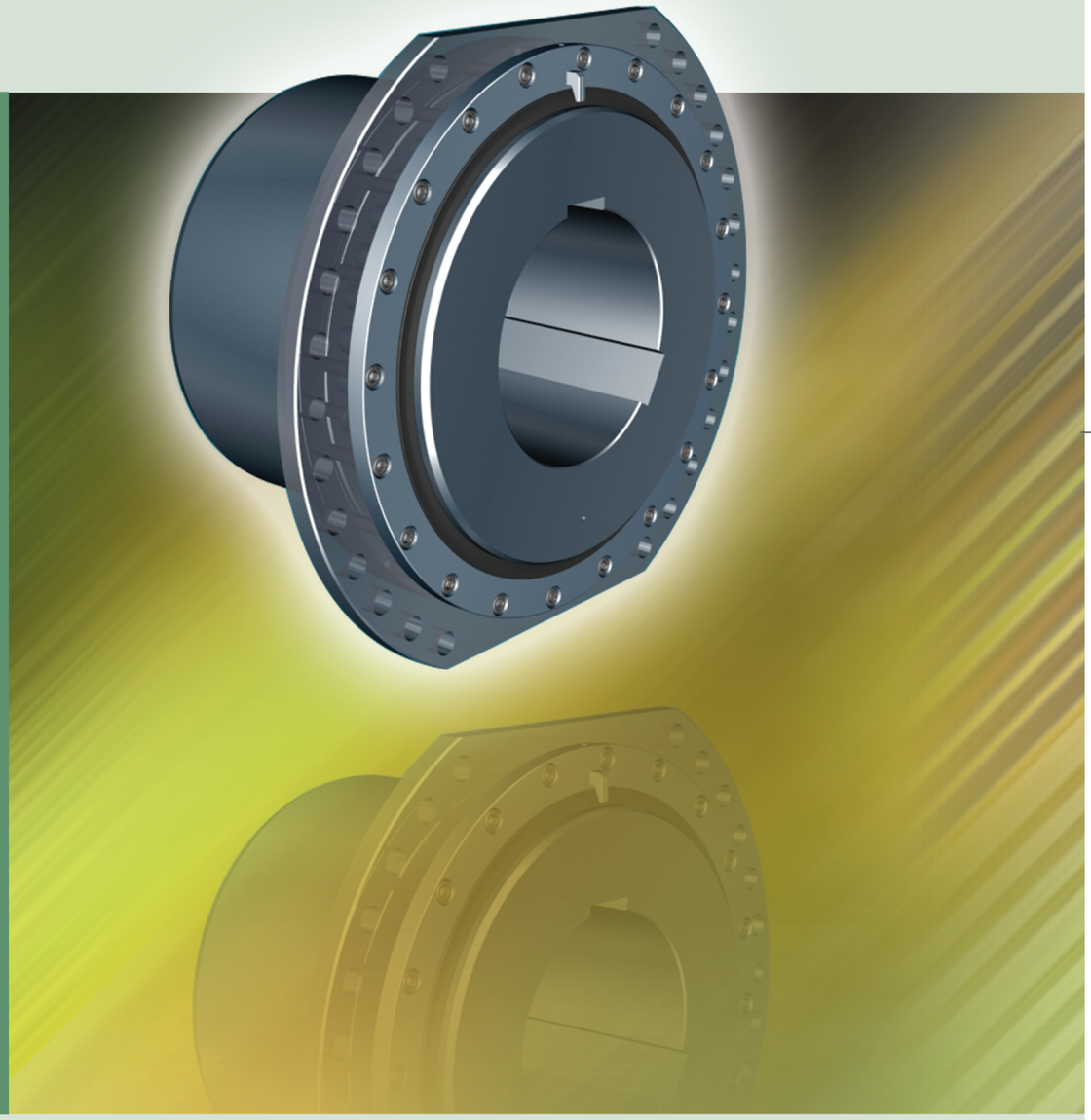
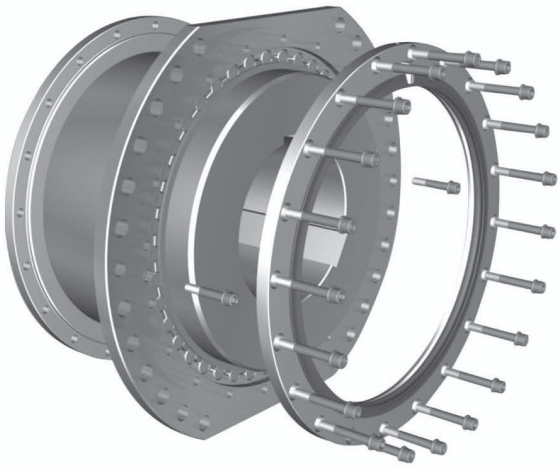
WIRE DRUM

COUPLING



WIRE DRUM COUPLING



■ Distinctive Features

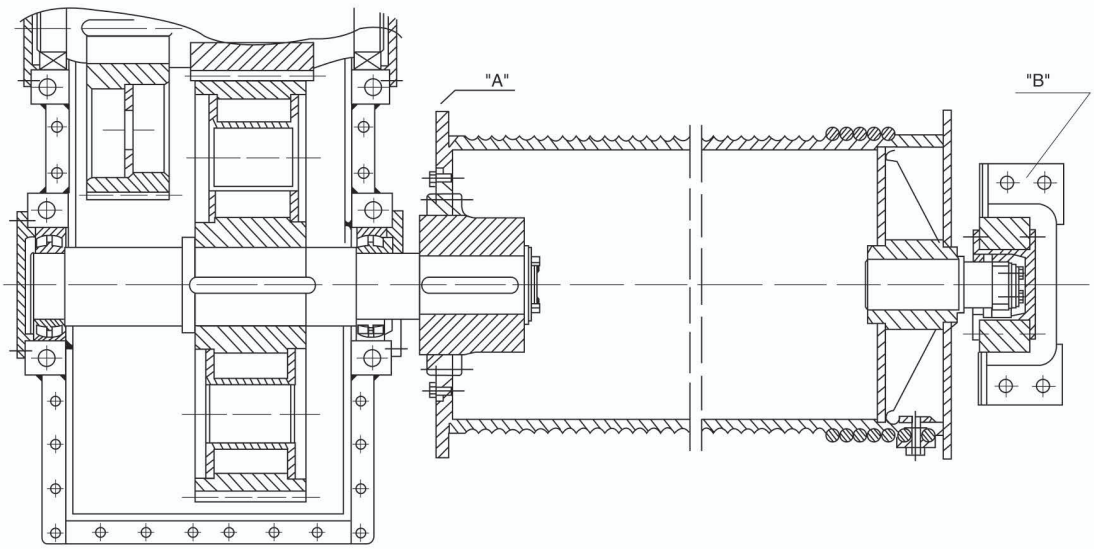
1. The *Jac* Drum coupling is designed for installation in drum drive of crain and conveying system. The drum coupling can be used in the very difficult and rough operating conditions of iron and steel work and continuous heavy load operation in shore cranes.

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 1.5°

3. According to the size of couplings, max ±3~±8mm of end float can be absorbed. Drum couplings are not suitable for transmitting axial forces.

4. With the design of decreasing slip movement of rollers. Backlash between crowned rollers and cylindrical bores, the relative movement between rollers and bores, which is cause of wear, are considerably reduced due to the natural movement of drum.

5. In the transmission of power, a stamping hardness of the rollers profile is produced, with which higher wear resistence is achieved.



■ Application

1. The *Jac* Drum coupling is suitable for crane and hoisting construction to couple wire drum and reducer gear box, especially it is 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. Fig1 and 2 show the arrangement of a drum drive of a crane assembly. These types of connection require a considerable amount of cost and time to align the system.

3. In the event of misialignment, which may occur due to inaccurate assembly, considerable additional forces become effective in the shaft. In this case bending stress at the drum shaft occur 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.

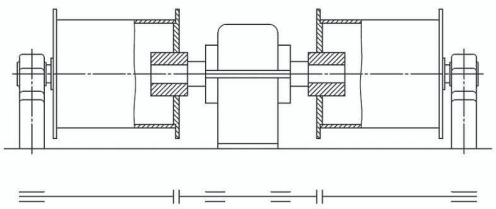


Fig. 1 Diagram of a twin-drum drive without built-in joint.

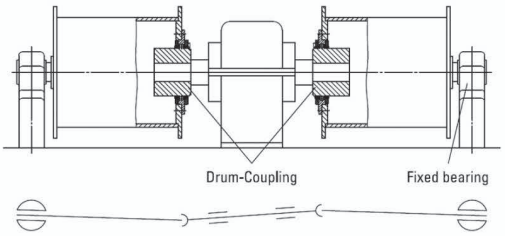


Fig. 2 Diagram of a twin-drum drive with built-in joint.

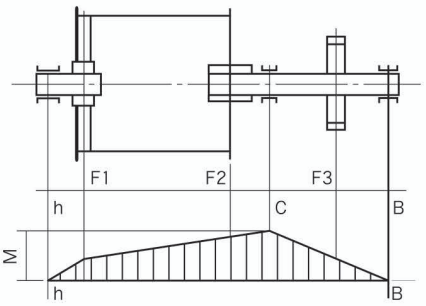


Fig. 3

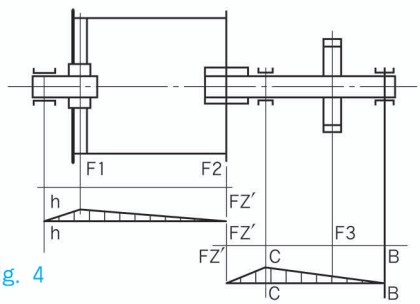
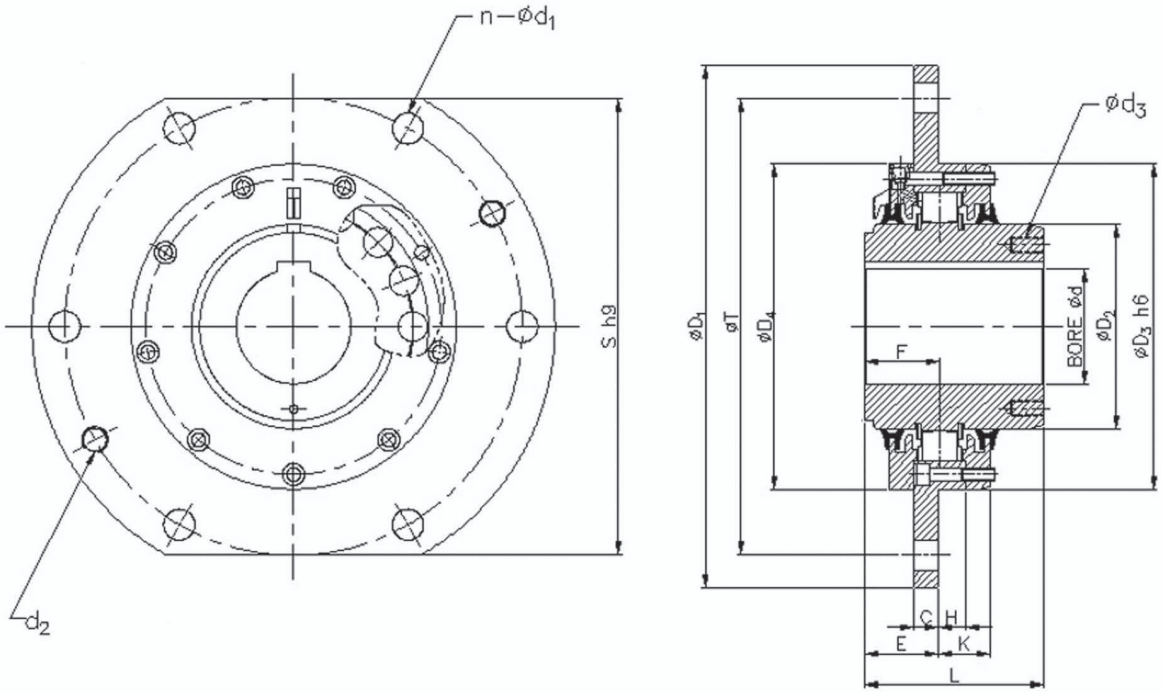


Fig. 4

■ Dimensions



Size	Torque Max (kgf • m)	Radial Lord Max (kgf)	Bore d		Dementions															Axial Play Max (mm)	Weight (kg)	GD² (kgf • m²)
			Min	Max	D1	L	D2	D3	D4	S	E	F	C	H	K	d3	T	n	d1	d2			
D0.25	459	1480	40	65	250	95	95	160	159	220	42	44	12	16	31	-	220	6	15	M12	3	10.5	0.06
D0.5	612	1683	50	75	280	100	110	180	179	250	42	44	12	16	31	-	250	6	15	M12	3	13	0.09
D0.75	765	1887	60	85	320	110	125	200	199	280	45	46	15	17	32	-	280	6	19	M16	4	18.5	0.16
D1	918	2040	60	95	340	125	140	220	219	300	45	46	15	17	32	-	300	6	19	M16	4	23	0.22
D1.3	1581	3163	80	110	360	130	160	240	239	320	45	47	15	19	34	-	320	6	19	M16	4	27.5	0.30
D1.6	1989	3571	80	125	380	145	180	260	259	340	45	47	15	19	34	-	340	6	19	M16	4	33	0.40
D2	2449	3928	100	140	400	170	195	280	279	360	45	48	15	22	32	M16	360	6	19	M16	4	44	0.58
D3	2857	4285	100	155	420	175	215	310	309	380	45	50	15	22	33	M16	380	6	19	M16	4	53	0.80
D4	3877	5000	100	180	450	185	255	340	339	400	60	61	20	22	31	M20	400	6	24	M20	4	70	1.33
D6	7143	11734	120	215	550	240	305	420	419	500	60	65	20	30	45	M20	500	6	24	M20	6	131	3.6
D10	12245	12755	140	245	580	260	345	450	449	530	60	67	20	30	46	M24	530	8	24	M20	6	164	5.2
D15	18367	15036	160	290	650	315	433	530	529	580	65	69	25	30	43	M24	600	8	24	M20	6	260	10.9
D26	31632	25510	170	310	680	350	470	560	559	600	65	78	25	35	63	M30	630	24	24	M20	6	340	15.8
D34	40816	30612	200	330	710	380	502	600	599	640	81	88	35	38	59	M30	660	24	28	M24	8	415	22.2
D42	51020	34693	230	370	780	410	566	670	669	700	81	88	35	38	59	M30	730	24	28	M24	8	560	36.8
D62	69898	38775	260	420	850	450	630	730	729	760	81	90	35	40	61	M30	800	24	28	M24	8	720	57.69
D82	94801	53517	290	450	940	500	693	800	799	830	86	92	40	50	62	M36	875	32	28	M24	10	1000	5
D92	112130	56065	330	470	1025	500	725	860	859	900	86	92	40	50	62	M36	945	32	34	M30	10	1100	119

■ Installation

1. 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

2. During installation, care must be taken to ensure that the indicator and markings on the teeth of crown must be in their correct position.

3. Before drilling the holes for fixing the drum bearing in the bridge, the articulated joint being installed must be adjusted along the axis.

4. 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.

Size	D 0.25~D 0.5	D 0.75~D 3	D 4~D 10	D 15	D 26~D 62
y	50	55	70	80	90

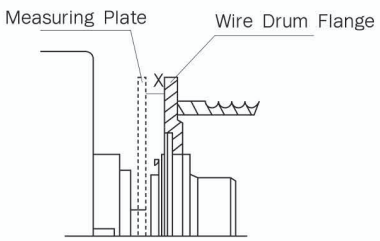


fig.1

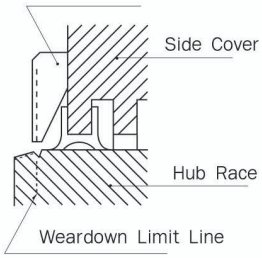


fig.2

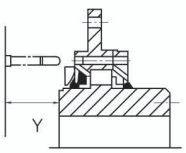
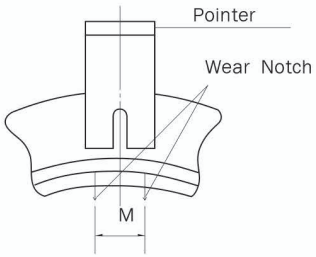


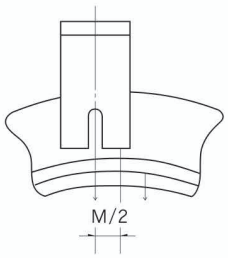
fig.3

5. At least once a year, following points must be checked ;
   a) tightness of screws.
   b) wear status ; if max wear shows, change the unit.
   c) 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						

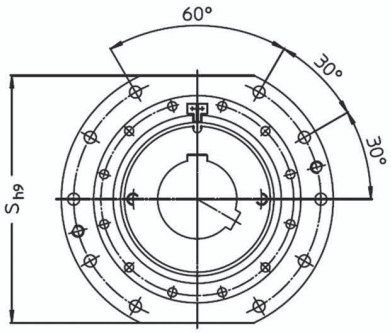


Normal

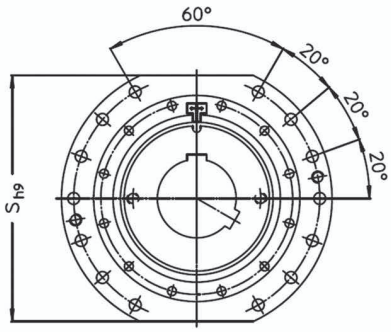


Weardown

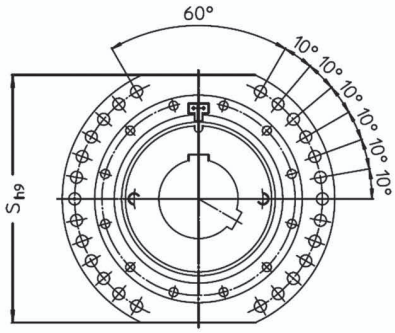
■ Flange holes



SIZE D0.25～D6



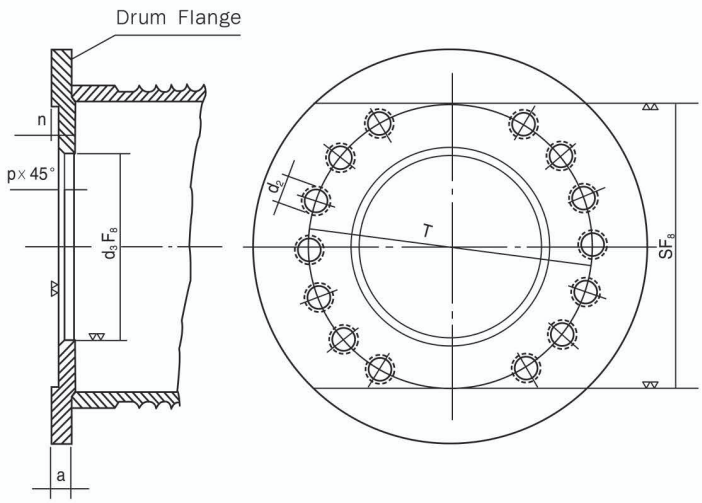
SIZE D10～D15

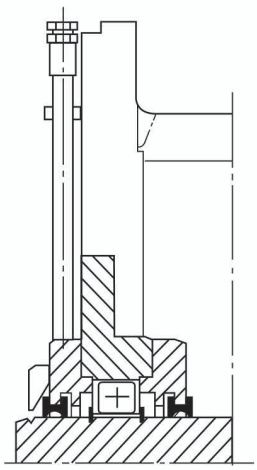


SIZE D26～D62

Cable drum flange, coupling side

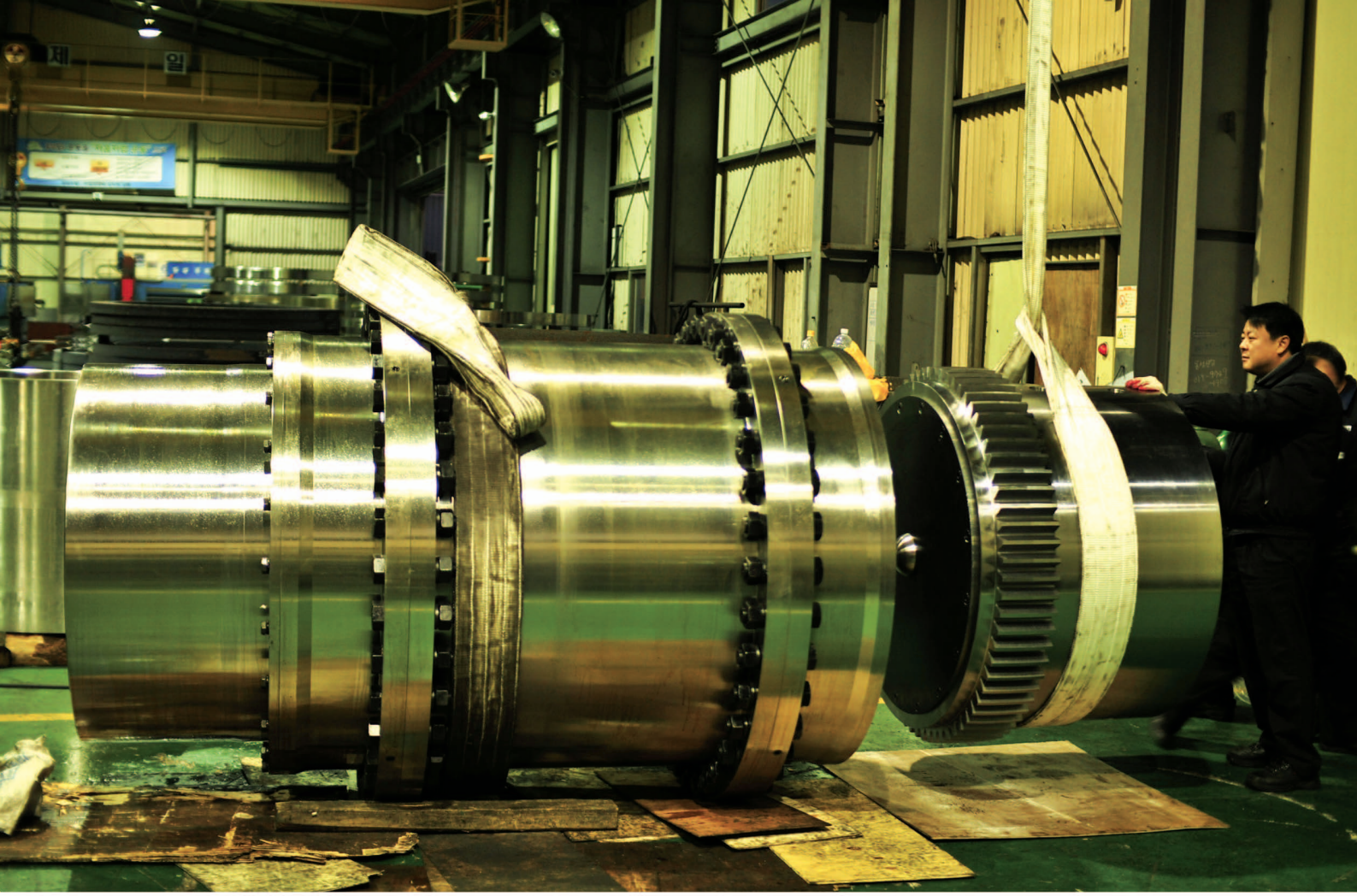
Size	D	T	S F8	a min.	d_1	d_2	d_3 F8	p	n min.
D0.25	250	220	220	25	15	M12	160	3	10
D0.5	280	250	250				180		
D0.75	320	280	280		19	M16	200		
D1	340	300	300				220		
D1.3	360	320	320				240		
D1.6	380	340	340				260		
D2	400	360	360				280		
D3	420	380	380				310		
D4	450	400	400	30	24	M20	340		
D6	550	500	500				420		
D10	580	530	530	40			450		20
D15	650	600	580	50			530		25
D26	680	630	600				560	5	
D34	710	660	640	60	28	M24	600		35
D42	780	730	700				670		
D62	850	800	760				730		
D82	940	875	830	70	28	M24	800	5	40
D92	1025	945	900		34	M30	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°~70°C. The lubrication periods vary according to the types of drive.



Jac coupling

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