

## INSTALLATION

During installation, care must be taken to ensure that the pointer. The wear grooves and the markings on the teeth of the crown, if any, are in their correct position. Should there not be enough space available to insert the

bolts for the retention of the outer cover(dimension "y" - Tab. 10 and Fig.8) then these bolts must be inserted into the holes of the cover before sliding the housing and hub into place.

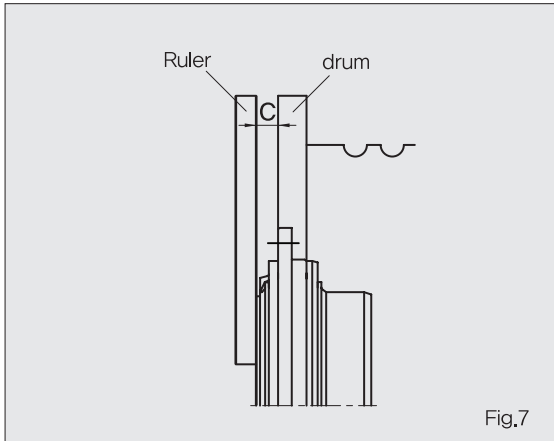


Fig.7

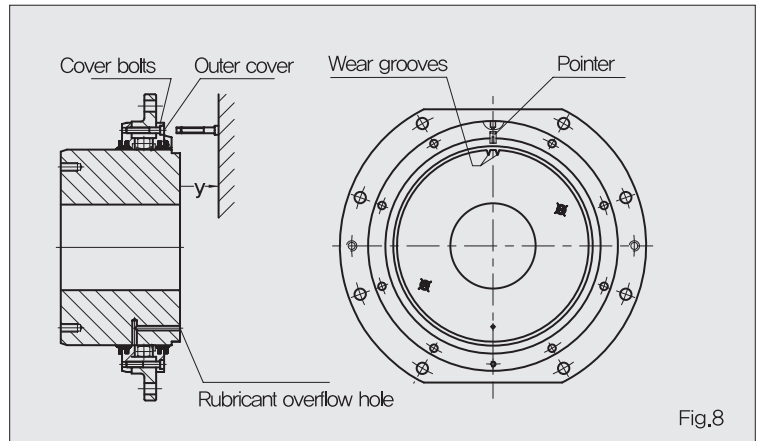


Fig.8

### ■ Adjustment of the Drum

True running in the axial direction is verified by measuring the distance "C" (see Fig.7) at four positions of rotation, about 90° apart.

The permissible discrepancy between any two measured values should not exceed  $\pm 0.1\text{mm}$ .

The largest difference between the four measured values of "C" may not exceed the following dimensions.

- ① Drum diameter < 1000 : 0.5mm
- ② Drum diameter  $\geq 1000$  : 0.8mm

Tab.10

Size	160~180	200~310	340~450	530	560~730
y(mm)	50	55	70	80	90

### ■ Axial Adjustment

Before drilling the holes for the retention of the drum bearing in the trestle, the articulated joint installed must be adjusted along its axis. The adjustment is correct when the pointer falls perfectly in line with the reference edge(Fig.9)

## LUBRICATION

The first should preferably be made during the assembly of the drum coupling. but in any case no later than after completing the assembly and in an off-load condition prior to operation of the crane

Grease should be forced in until clean lubricant flows out

of the overflow hole(Fig.8)

The lubrication periods vary according to the types of drive and are shown on Tab. 11.

The types and quantities of lubricant are shown on Tab. 12, 13.

Tab.11

Drive Group	Lubrication periods	
	Operating hours	Frequency
1Bm~3m	2,000	At least 1/every 2year
4m~5m	1,000	At least 1/every year

※Drive group, see to Tap.8,

### ■ Operating Temperature $-20^{\circ}$ to $+80^{\circ}\text{C}$

Tab.12

Makers	Specification
Shell	Shell alvania grease EP2
Mobll	Mobilux EP2

Tab.13

Size	Quantity(kg)	Size	Quantity(kg)	Size	Quantity(kg)	Size	Quantity(kg)
160	0.08	240	0.15	340	0.45	560	0.9
180	0.10	260	0.17	420	0.57	600	1.0
200	0.12	280	0.19	450	0.65	670	1.3
220	0.14	310	0.23	530	0.72	730	2.0

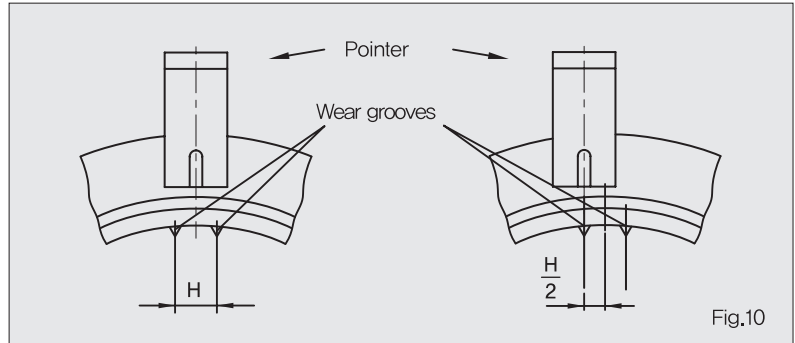
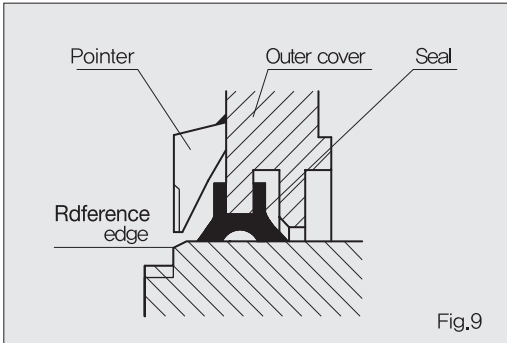
## WEAR

The wear of the drum coupling can be assessed as a function of the misalignment between pointer and wear grooves (see Fig. 10)

The maximum permissible wear values  $H/2$  are given in Tab. 14. If these limits have been exceeded, the drum

coupling must be replaced.

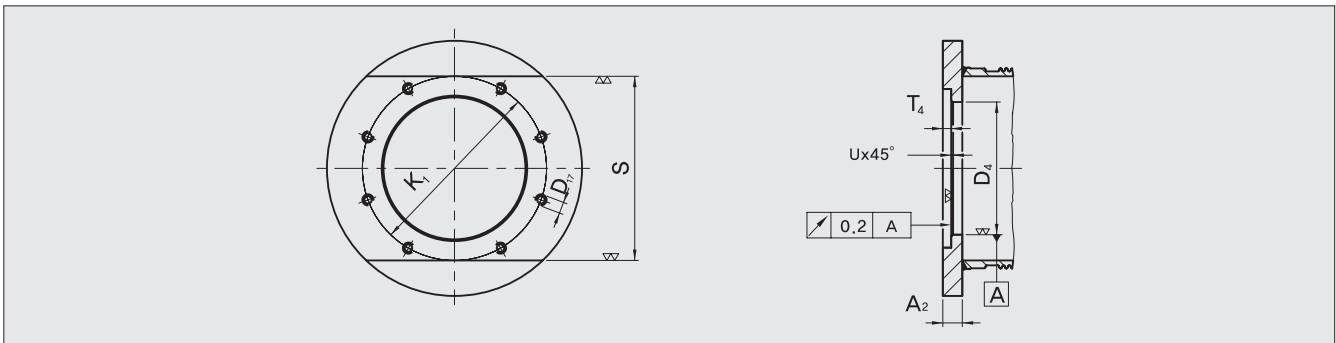
In applications implying 2 load directions, the maximum permissible wear values  $H/2$  as per Tab. 14 must be divided by two. It is recommended to subsequently provide markings correspondingly.



Tab.14

Coupling size	160	180	200	220	240	260	280	310	340	420	450	530	560	600	670	730
Max. permissible wear ( $H/2$ )(mm)	4	4	4	4	6	6	6	6	6	8	8	8	8	8	8	8

## DETAIL FOR DRUM FLANGE



Size	A <sub>2</sub> min	K <sub>1</sub>	S <sup>F8</sup>	D <sub>4</sub> <sup>F8</sup>	D <sub>17</sub>		T <sub>4</sub> min	U
					Thread	Qty.		
160	25	220	220	160	M12	6	10	3
180	25	250	250	180	M12	6	10	3
200	25	280	280	200	M16	6	10	3
220	25	300	300	220	M16	6	10	3
240	25	320	320	240	M16	6	10	3
260	25	340	340	260	M16	6	10	3
280	25	360	360	280	M16	6	10	3
310	25	380	380	310	M16	6	10	3
340	30	400	400	340	M20	6	10	3
420	30	500	500	420	M20	6	10	3
450	40	530	530	450	M20	8	20	3
530	50	600	580	530	M20	8	25	3
560	50	630	600	560	M20	24	25	5
600	60	660	640	600	M24	24	35	5
670	60	730	700	670	M24	24	35	5
730	60	800	760	730	M24	24	35	5

### ■ Bolt connections

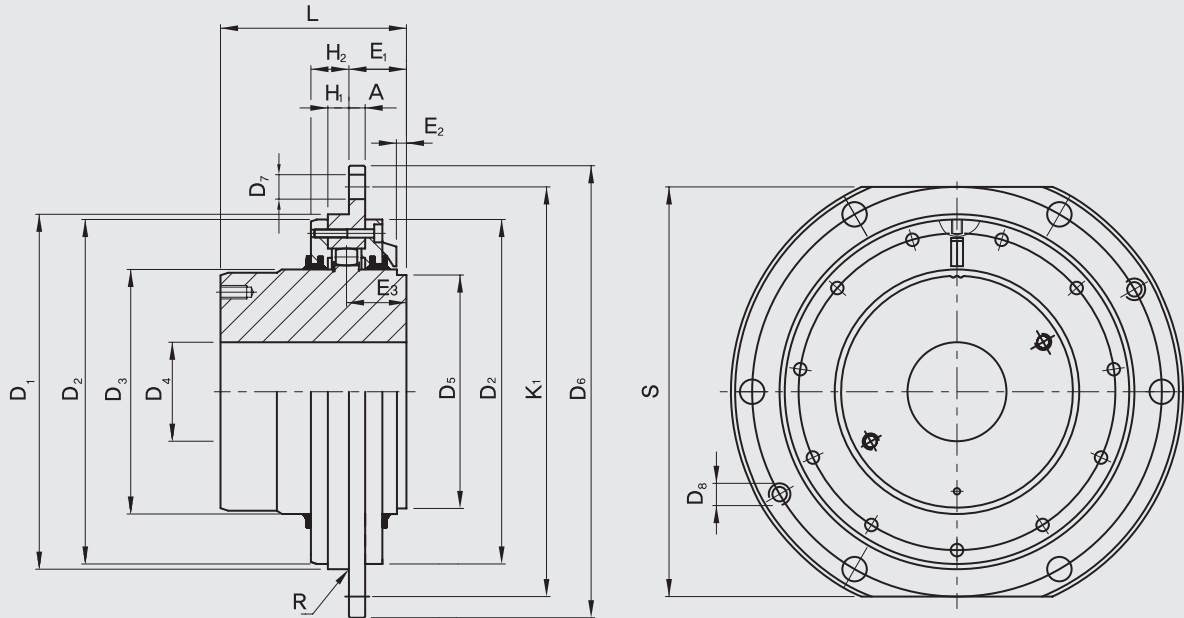
Bolt of strength classification 8.8 should be used as fixing bolts and also to retain the covers. These are to be pre-tightened with a torque-wrench to the torque figures shown in Tab. 15.

Tab.15

Bolt size	M8	M10	M12	M16	M20	M24
Fastening torque (N·m)	26,5	51	98	216	421	725

## DIMENSIONS

DR



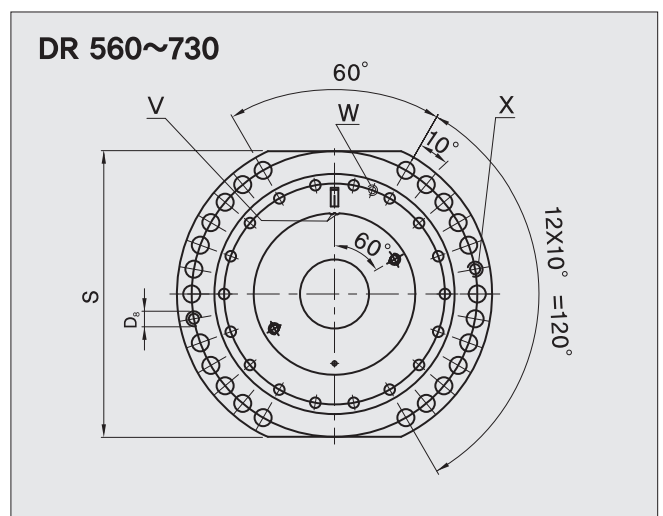
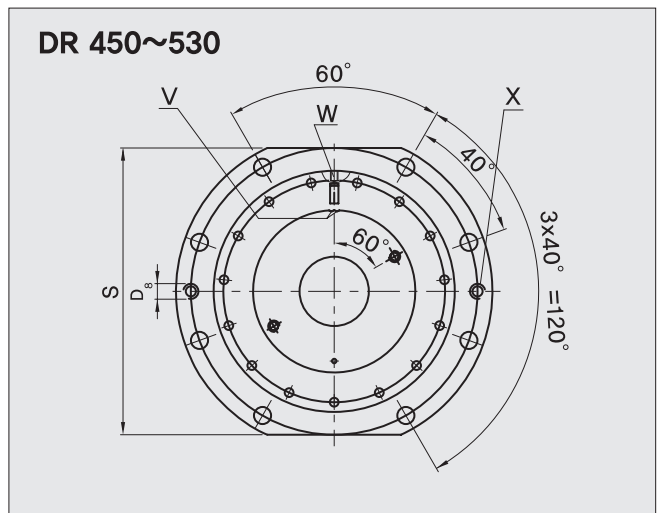
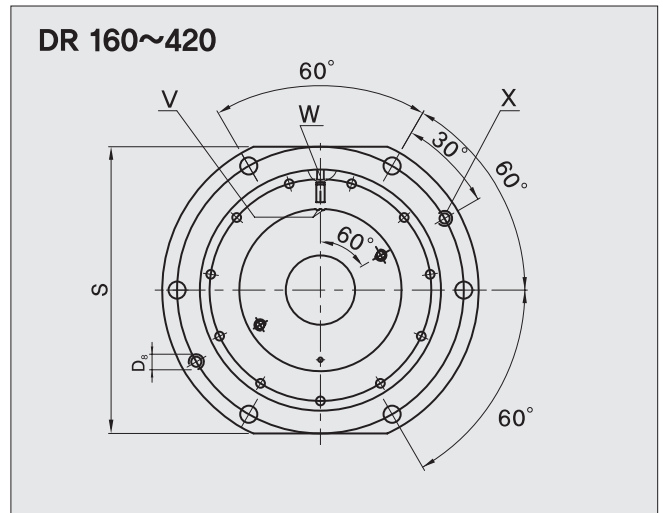
Size	Max. torque T <sub>max</sub> (N·m)	Max. radial load F <sub>max</sub> (N)	Bore D <sub>4</sub>		A	D <sub>3</sub>	D <sub>2</sub>	D <sub>1</sub> <sup>h6</sup>	D <sub>5</sub>	D <sub>6</sub>	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	H <sub>1</sub>	H <sub>2</sub>	L	Axial clear- ance max.	Mass (kg)	J (kg·m <sup>2</sup> )
			min	max															
160	4500	14500	40	65	12	95	159	160	90	250	42	5	44	16	31	95	3	12	0,06
180	6000	16500	50	75	12	110	179	180	105	280	42	5	44	16	31	100	3	19	0,13
200	7500	18500	60	85	15	125	199	200	120	320	45	5	46	17	32	110	4	23	0,17
220	9000	20000	60	95	15	140	219	220	135	340	45	5	46	17	32	125	4	27	0,28
240	15500	31000	80	105	15	160	239	240	150	360	45	5	47	19	34	130	4	38	0,33
260	19500	35000	80	120	15	180	259	260	170	380	45	5	47	19	34	145	4	48	0,45
280	24000	38500	100	135	15	200	279	280	190	400	45	5	47	19	34	170	4	62	0,61
310	28000	42000	100	145	15	220	309	310	210	420	45	5	47	19	34	175	4	76	0,83
340	38000	49000	100	175	20	260	339	340	250	450	60	9	61	22	40	185	4	106	1,50
420	70000	115000	120	205	20	310	419	420	295	550	60	7	61	22	42	240	6	189	3,67
450	120000	125000	140	230	20	350	449	450	335	580	60	7	61	22	42	260	6	242	5,31
530	180000	150000	160	280	25	415	529	530	400	650	65	7	66	27	47	315	6	403	11,87
560	310000	250000	170	300	25	445	559	560	430	680	65	7	69,5	34	54	350	6	499	16,31
600	400000	300000	200	315	35	475	599	600	455	710	81	16	85,5	34	56	380	8	616	23,53
670	500000	340000	230	355	35	535	669	670	515	780	81	16	85,5	34	56	410	8	827	38,48
730	685000	380000	260	400	35	600	729	730	580	850	81	13	85,5	34	59	450	8	1,119	62,00

1. Mass & J are the values in case of solid shaft. ( $GD^2 = 4J$ )

2. For K<sub>1</sub>, D<sub>7</sub>, D<sub>8</sub>, S, R see to dimension of page 23.

## DIMENSIONS

Size	Bore for bolts			K <sub>1</sub>	D <sub>1</sub> <sup>h6</sup>	S <sup>h9</sup>	R	D <sub>8</sub>
	D <sub>7</sub>	Screw	Qty					
160	15	M12	6	220	160	220	2,5	M12
180	15	M12	6	250	180	250	2,5	M12
200	19	M16	6	280	200	280	2,5	M16
220	19	M16	6	300	220	300	2,5	M16
240	19	M16	6	320	240	320	2,5	M16
260	19	M16	6	340	260	340	2,5	M16
280	19	M16	6	360	280	360	2,5	M16
310	19	M16	6	380	310	380	2,5	M16
340	24	M20	6	400	340	400	2,5	M20
420	24	M20	6	500	420	500	2,5	M20
450	24	M20	8	530	450	530	2,5	M20
530	24	M20	8	600	530	580	2,5	M20
560	24	M20	24	630	560	600	4	M20
600	28	M24	24	660	600	640	4	M24
670	28	M24	24	730	670	700	4	M24
730	28	M24	24	800	730	760	4	M24



V : Wearing grooves

W : Threaded connection for lubricant supply

X : Release threads