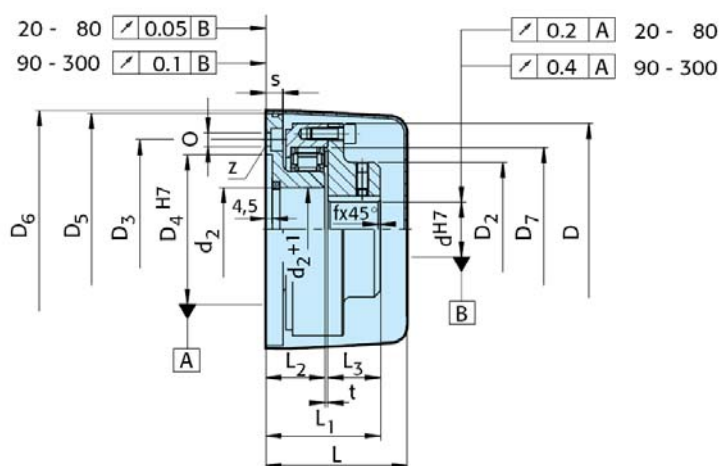


Installation and Maintenance Instructions Freewheel Type CR

To avoid premature failure of the freewheel or possible machine malfunction, installation of the freewheel should be carried out by suitably qualified personnel and according to the following instructions.

STIEBER will not accept liability in cases of non-compliance with these instructions!



Bauart Type Modèle	Größe Size Taille	Standard- bohrung Standard bore Alésages standard	Leerlaufdrehzahlen Overrunning speeds Vitesses en roue libre			Anzahl Number Nombre										Gewicht Weight Masse									
			$T_{K(1)}$	$n_{a,min}^{(2)}$	$n_{a,max}^{(3)}$	d_2	D_5	D_6	D_4^{H7}	D_2	D_7	D	D_3	z	0	L_2	L_3	L_1	L	s	t	f			
		d_1^{H7} [mm]	[Nm]	$[\text{min}^{-1}]$	$[\text{min}^{-1}]$	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
CR	20-N	20 - 25	225	900	5000	28	108	116	70	45	75	95	80	6	6.6	37,5	25	66	79	12	3,5	1	2		
	30-N	30 - 40	425	820	4300	40	125	133	90	70	90	112	100	8	6.6	37,5	30	71	84	12	3,5	1	2,8		
	50-N	50	763	750	3400	55	155	165	100	90	110	142	120	8	9	41,5	35	80	95	15	3,5	1,5	5		
	60-N	60	2875	670	2800	72	185	191	120	105	136	172	140	10	9	53	45	103	125	15	5	1,5	12		
	80-N	80	4375	620	2400	92	218	224	140	130	162	205	170	12	11	53	54	113	138	15	6	2	17		
	90-N	90	10125	350	1900	92	260	268	130	140	205	250	180	12	18	98	90	196	213	18	8	2	39		
	120-N	120	16250	350	1700	122	300	308	200	180	230	280	260	16	18	107	90	205	228	26	8	2	57		
	150-N	150	23750	320	1500	152	340	348	220	220	260	320	290	18	18	115	100	223	244	30	8	2	78		
	200-N	200	38750	300	1250	202	400	408	240	260	320	380	360	16	22	115	110	233	254	32	8	2	98		
	240-N	240	55000	300	1100	242	460	468	320	320	370	440	410	18	22	120	120	248	264	35	8	2	143		
	260-N	260	76000	280	950	262	520	528	360	350	408	500	440	24	22	122	150	280	294	38	8	2	203		
	300-N	300	93750	270	850	305	580	590	400	400	460	560	530	16	26	122	180	310	330	40	8	2	320		

Prior to Installation:

The freewheels should be unpacked and installed in a clean, dry working environment.

Freewheeling direction should be checked prior to installation.

If the direction of freewheeling is to be reversed:

- Remove the inner race from the outer race whilst slightly rotating the inner in the free-wheeling direction.
- Remove the bolts holding the outer race to the hub. Pull the cage from the outer race.
- Turn cage through 180 degrees and reinstall into outer race. (Ensure the sprags are installed correctly.)
- Torque tighten the outer race to the hub. (The torque level is defined by bolt size and quality used.)
- Secure bolts with locking agent such as Loctite 243.

The hub of the outer race should be fitted to a shaft of h6 tolerance.

The mounting register for the flange of the inner race should be to h6/j6 tolerance.

The minimum free running speed of the unit must be above the minimum specified in our catalogue.

Installation:

Remove the inner race from the outer race whilst slightly rotating the inner in the freewheeling direction.

- Torque tighten the flange of the inner race to its mounting. Bolts of 8.8 quality or better should be used, tighten them according to size and quality as specified below.
- Use a key to DIN 6885 sheet 1. The key should be the length of the outer race hub.
- Fit the outer race to the shaft, slightly rotating the outer and shaft in the freewheeling direction.
- Ensure the axial clearance between the inner race and the hub of the outer race is according to the limits in table below.
- Ensure that concentricity and parallelism between inner and outer are within the limits stated in table below.
- Secure outer race to the shaft using a locking screw. (When unit is installed on a vertical shaft a retaining collar should be used.)
- The (optional) dust proof cover can now be pressed onto the flange of the inner race.

Permissible concentricity and alignment errors

Bore Ø [mm]	Concentricity Error TIR [mm]	Parallelism TIR [mm]
20 - 80	0,2	0,05
90 - 300	0,4	0,1

Bolt tightening torque

Bore Ø [mm]	Bolt Size	Tightening Torque [Nm]	
		8.8	10.9
20 - 30	M6	9,9	14
50 - 60	M8	24	34
80	M10	47	66
90 - 150	M16	200	280
200 - 260	M20	390	550
300	M24	670	950

Axial clearance

Bore Ø [mm]	Gap [mm]
20 - 50	3,5
60	5
80	6
90 - 300	8

After Installation:

After installation, ensure the backstop permits rotation in the required direction. The backstop should be lightly oiled with corrosion inhibitor prior to use. Inhibitor used by STIEBER: Rivotla KSP Machine oils with corrosion protecting agents and anti-ageing additives can be used.

Maintenance:

Protect backstop against corrosion and wear by periodically lightly lubricating the sprag contact surfaces. (Frequency is determined by operating environment).

	Ambient temperature				
	-40°C to- 15°C	-15°C to +15°C	+15°C to +30°C	+30°C to +50°C	
	Operating temperature				
	-20°C to +20°C	+10°C to +50°C	+40°C to +70°C	+50°C to +85°C	
	Oil				
ISO - VG DIN 51519	10	22	46	100	
ARAL	SUMOROL CM10	SUMOROL CM22	MOTANOL HK46	DEGOL CL100T	ARALUB HL2
BP	ENERGOL CS10	ENERGOL CS22	ENERGOL CS46	ENERGOL RC100	ENERGREASE LS2
DEA	ASTRON HL10	ASTRON HL22	ASTRON HL46	ASTRON HL100	GLISSANDO 20
ESSO	NUTO H10 SPINESSO 10	NUTO H22 SPINESSO 22	NUTO H46 TERESSO 46	NUTO H100	BEACON 2
FUCHS	RENOLIN MR3	RENOLIN DTA22	RENOLIN DTA46	RENOLIN MR30	RENOLIT LZR2
KLÜBER	CRUCOLAN 10	CRUCOLAN 22	CRUCOLAN 46	CRUCOLAN 100	POLYLUB WH2
MOBIL	VELOCITE No6	VELOCITE No10	VACTRA MEDIUM VG46	VACTRA HEAVY VG100	MOBILUX 2
SHELL	MORLINA 10	MORLINA 22	MORLINA 46	MORLINA 100	ALVANIA G2
TOTAL	AZZOLA ZS10	AZZOLA ZS22	AZZOLA ZS46	AZZOLA ZS100	MULTIS 2
Alternatively we strongly recommend the use of multigrade oils SAE 10W-40 at working temperature between 0° and +80 ° C.					