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!

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 freewheeling 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	10	14
50 - 60	M8	25	34
80	M10	48	68
90 - 150	M16	206	290
200 - 260	M20	402	550
300	M24	690	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: Rivolta 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)