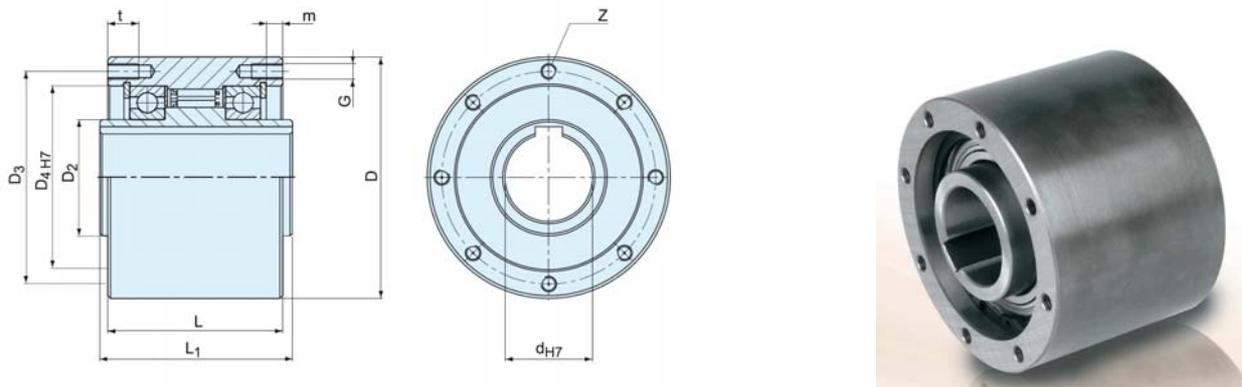


## Installation and Maintenance Instructions Freewheel Type SMZ

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.



Type	Size	Overrunning speeds														Weight [kg]
		$d_{H7}$ [mm]	$T_{KN}^{1)}$ [Nm]	$n_{amax}^{2)}$ [min <sup>-1</sup> ]	$n_{amax}^{3)}$ [min <sup>-1</sup> ]	D	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub> <sup>H7</sup>	L	L <sub>1</sub>	G	z	t	m	
SMZ	20	300	1600	700	80	30	68	55	65	67	M6	6	12	7,6	2	
	30	1035	1500	500	100	45	88	75	80	82	M8	6	16	8,9	3,7	
	35	1100	1400	300	110	50	95	80	85	87	M8	6	16	8,7	4,8	
	45	1750	1300	300	125	60	110	95	90	92	M8	8	16	8,4	6,2	
	60	3400	1100	250	155	80	140	125	100	102	M8	8	16	9,1	10,2	
	70	4300	1000	250	175	95	162	145	103	105	M8	8	16	8,6	13,2	

### Description:

The main components of SMZ freewheel units are: Outer race, inner race, DC-cage assembly with a number of individually spring energised sprags, two sealed ball bearings. SMZ units may be installed with either the inner race or the outer race overrunning, subject to the limits specified in the table below.

### Prior to Installation:

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

The inner race should be fitted to a shaft of h6 tolerance.

The mounting register for the inner diameter of outer race should be to H7 or G7 tolerance. The freewheeling direction should be checked prior to installation.

If reversal of the freewheeling direction is required, turn the freewheel through 180°.

We recommend the following tightening torque for the mounting bolts, based on bolts to grade 10.9.

Size	Bolts	Tightening torque [Nm]
20	M6	14
30 to 70	M8	35

#### Installation:

The clutch should be installed as an assembly.  
The inner race should be pulled on to the shaft. The key should be the full length of the hub.

#### Apply axial load to the inner race only.

Use a circlip or retainer plate for axial location of the freewheel.

#### After installation:

After installation, ensure smooth rotation of the unit in the freewheeling direction.  
The expected drag torque when overrunning is about 1/1000 of the freewheel nominal driving torque.

#### Dismantling:

To remove the unit follow the installation instructions in reverse order.  
Apart from the replacement of seals we recommend the unit to be dismantled only for re-greasing every two years.

#### Technical data of SMZ freewheels:

Size	Max.Torque* [Nm]	Overrunning Speed [rpm]	
		Inner Race	Outer Race
20	600	1600	700
30	2070	1500	500
35	2200	1400	300
45	3500	1300	300
60	6800	1100	250
70	8600	1000	250

\*) The max. torque never must be exceeded!!

#### Lubrication:

SMZ freewheels are grease filled prior to despatch and are ready for installation. The units are not equipped with grease fittings to avoid filling in too much grease.

#### Maintenance:

No maintenance is required. To increase the service life we recommend to remove the units, clean, inspect and re-grease them every two years.

## Recommended lubricants

<b>ISO - VG DIN 51519</b>	
<b>ARAL</b>	ARALUB HL2
<b>BP</b>	ENERGREASE LS2
<b>DEA</b>	GLISSANDO 20
<b>ESSO</b>	BEACON 2
<b>FUCHS</b>	RENOLIT LZR2
<b>KLÜBER</b>	POLYLUB WH2
<b>MOBIL</b>	MOBILUX 2
<b>SHELL</b>	ALVANIA G2
<b>TOTAL</b>	MULTIS 2

The free volume between the bearings has to be filled 1/3 to 1/2 with grease to get the right amount. Greases of consistency DIN 51818 NLGI grade 0 to 00 are suitable, too.