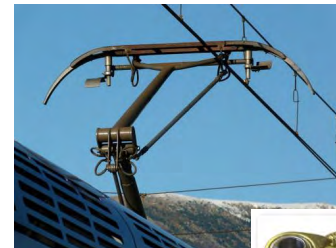
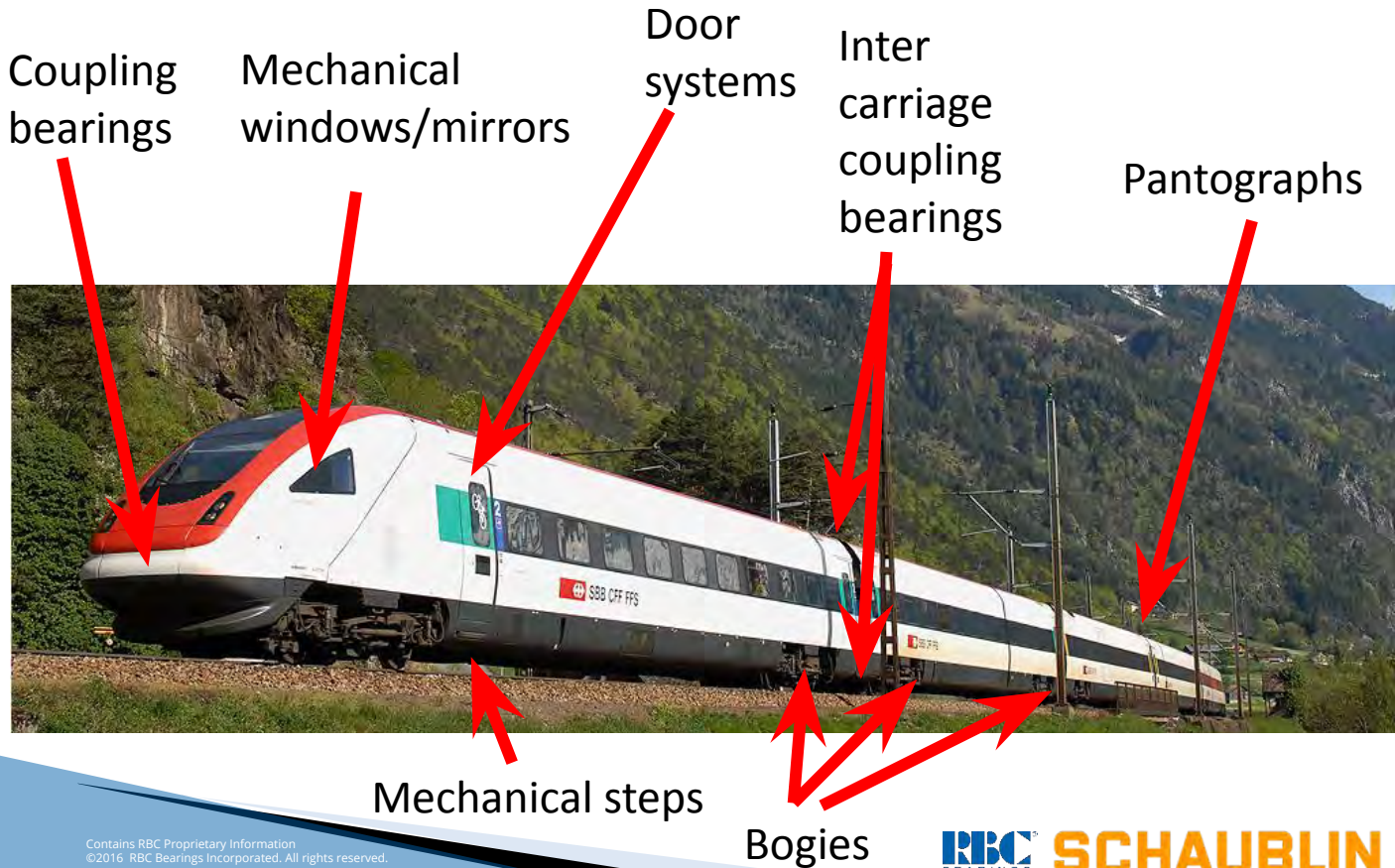


RBC Bearings - SCHAUBLIN

Railway Bearing solutions



Typical Rail Applications



RBC SCHAUBLIN – Railway products



Engineering Support

We develop engineering application's from the selection of bearing materials to in-house testing of bearing assemblies.

Quality Assurance

Schaublin is certified to the standard for industrial, railway and aerospace industries

- ISO 9001
- EN 9100
- EN 9120
- IRIS

Numerous applications

- Secondary suspension joints
- Coach-to-coach dampers
- Anti roll bar linkages
- Intercar couplers / Front hatches
- Tilt mechanism and actuation systems
- Rod ends systems for door mechanisms

RW Customer

Base

- ALSTOM
- BOMBARDIER
- CAF
- CSR
- EUROSTAR
- HÜBNER
- KORAIL
- RATP
- RENFE
- SNCB
- SNCF

- High speed trains
- Regional Trains
- EMU,DMU
- Subway trains
- Tramway
- Light rail systems



Railway applications

□ Anti Roll Bar Linkages

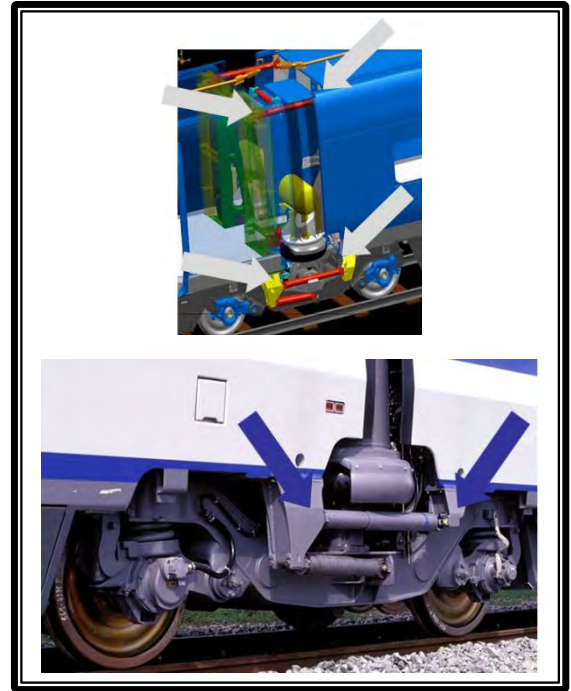
- Linkage assemblies
 - S-FiT™ Bearings
 - CTRL™ Bearings
 - V-Fit™ Bearings
- Spherical plain bearings
 - Sealed, self-lubricated
- Laminated Elastomeric bearings



Railway applications

□ Inter car damper joints

- Spherical plain bearings
 - Self-lubricating bearings
 - Sealed bearings



Railway applications

□ Bogie applications

Anti Roll Bar linkage (BAR):

- Connecting Rod Assembly
- High performance Elastomeric bearing

Yaw dampers:

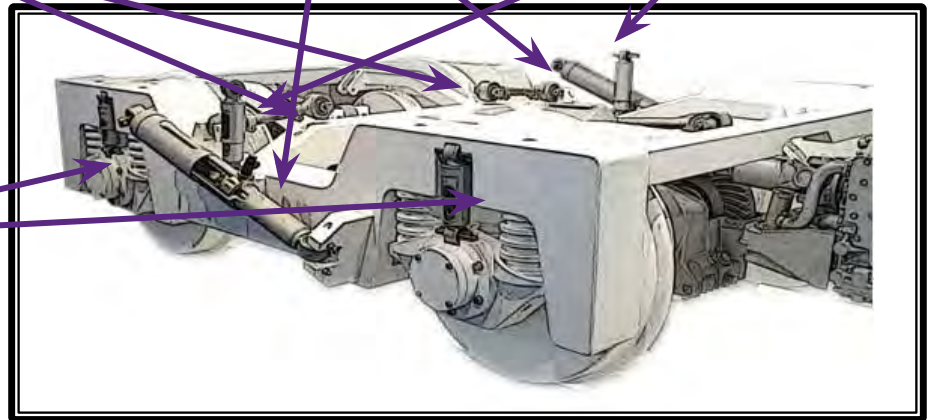
- Spherical Plain Brgs
- Elastomeric bushings

Secondary suspension dampers:

- Spherical Plain Brgs
- Elastomeric bushings

Primary suspension dampers:

- Elastomeric bushings



Railway applications

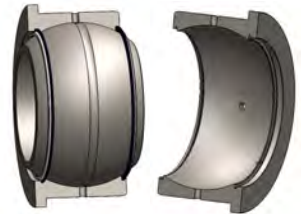
□ Pantographs

- Noise insulators, rubber bushings
- Plain bearings, Bushings
- Rod ends



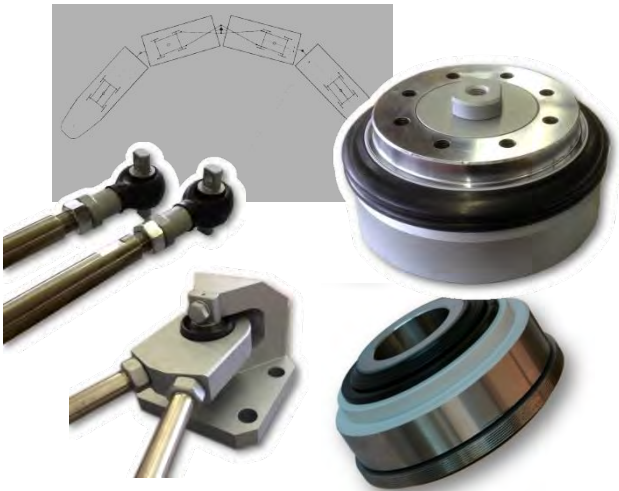
Railway applications

- Couplers, draw gear modules, front hatch mechanism
 - Plain bearings
 - Rubber bearings
 - Rod ends



Railway applications

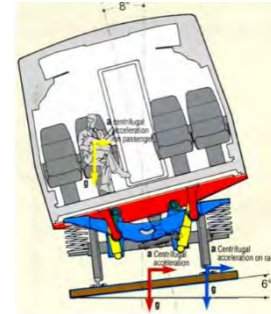
- Car coupler and inter-car coupler bearings
 - Light rail system low-floor car coupler



Railway applications

□ Controlled tilt systems

- Plain bearings
- Rubber bearings



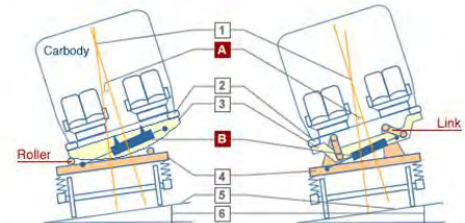
Japanese Form

Mechanism of passive and controlled pendulum-type tilting

European Form

Mechanism of active and forced inclined link-type tilting

- | | | |
|-----------------------|------------------|-------------|
| 1 Tilt rolling center | 2 Bolster spring | 3 Tilt beam |
| 4 Bogie frame | 5 Track surface | 6 Cant |



New product - **SFiT™**

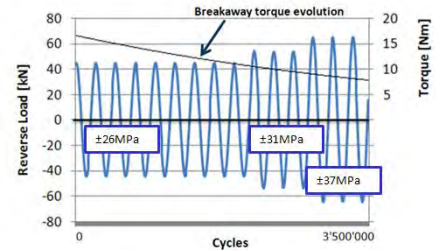
□ Evolution of the Standard to the **SFiT™** bearing

- Possible interchange with existing standard
- Installation and replacement of the bearings several times in the same lug.
- Quick installation, Torque controlled, maintenance cost reduced

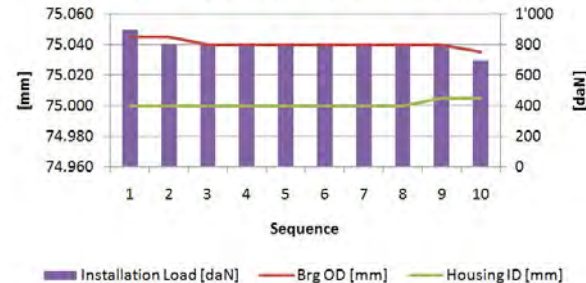
**PATENT
PENDING**



FATIGUE TEST
Reverse load combined
with $\pm 15^\circ$ swivel motion

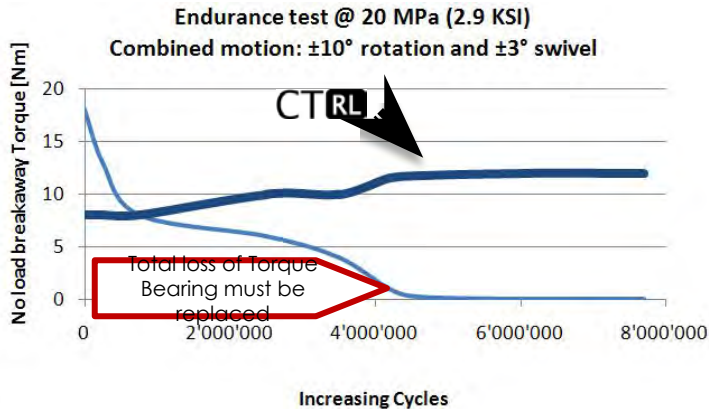


**Evolution of the parameters of installation after
repetition of the assembly in the same lug**



New product - CT^{RL}™

- Introduction to the CT^{RL}™ bearing
 - Continuous torque, extended life, no internal clearance
 - Possible interchange with existing standard
 - Quick installation, Controlled Torque, maintenance cost reduced.



**PATENT
PENDING**

RBC[®]
BEARINGS

SCHAUBLIN



RBC Bearings

Railway products



Self-lubricating spherical plain BEARINGS for railway applications

by Schaublin

Background

- Beginning in the middle of the 80's with railway applications, Schaublin has developed a solid expertise in designing and manufacturing spherical plain bearings for railway applications
- These applications require high performance in severe environments with vibrations, reverse loads, dust contamination, and humidity at high levels of strain

A Performance Solution

- Our bearings benefit from the advanced liner systems developed by RBC-Bearings, inventor and leader in liner technology
- The self-lubricating liner operates on an appropriate sliding surface, creating a PTFE lubricant film at the sliding interface of the bearing
 - Low coefficient of friction
 - Very low wear rate at high load levels in oscillatory conditions
 - High static strength and increased stiffness
 - Excellent behavior in vibratory conditions due to the inherent damping qualities of the woven fabric liner
- Most of our bearings are equipped with high strength seal boots, which effectively prevent the bearing heart from contamination

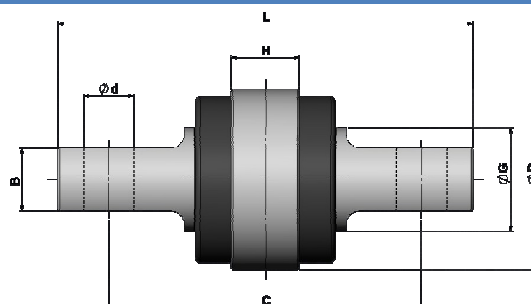
Typical applications

High speed trains, intercity trains, Metros and Tramway systems

- Anti roll bar linkages
- Suspension, damper joints
- Tilt mechanism and actuation bearings
- Car coupler systems

Certified supplier

- RBC Schaublin is approved by numerous major companies in the railway and aerospace industry
- SNCF AQF-2 approved supplier
- RBC Schaublin develops highly engineered products to customer specifications



PN#	Ø D [mm]	L [mm]	H [mm]	C [mm]	Ø d [mm]	B [mm]	Ø G [mm]	Out of plane α [°]	Weight [kg]
SSE99001	62	115	25.2	88	13	16	31.8	23	1.05
SSE99002	75	128	28.2	94	17.5	16	37.8	15	1.7
SSE99003	75	173	28.2	130	19	26	43	15	2.25
SSE99004	75	128	28.2	98	17.5	16	37.8	15	1.7
SSE99005	40	100	19	78	10.5	10	23.5	9	0.4
SSE99006	55	125	25	90	17	22	32	15	0.9
SSE99007	55	125	25	90	17	22	32	15	0.95
SSE99009	75	130	28.2	90	22	25	44	6	1.7
SSE99010	62	152	22	120	18	18	32	23	
SSE99011	62		22					23	0.4
SSE99012	62	120	21.7	88	17.5	16	35	18	1
SSE99013	55	125	25	90	17	22	32	18	0.85
SSE99014	55	125	25	90	17	22		19	0.93
SSE99015	75	128	28.2					16	2.05
SSE99016	70	150	22	110	M20x2.5	28.2	37	20	1.67
SSE99017	70	150	22	110	17	28.2	37	20	1.72
SSE99018	55	115	25	80.3	17	22	32	17	0.85
SSE99020	55	125	25	90	17	22	32	15	0.93
SSE99021	40	100	19	78	10.6	10	23	9	0.42
SSE99022	62		22					23	0.4
SSE99023	75	128	28.2	98	17.5	16	37.8	15	1.7
SSE99024	75	173	28.2	130	19	26	43	15	2.3
SSE99027	75	128	28.2	96	17	16	37.8	15	1.7
SSE99028	75	155	28.2	120	17	16	40	21	1.9
SSE99029	75	173	28.2	130	21	26	43	15	2.21
SSE99030	62	115	25	88	13	16	31.8	4	1.26
SSE99031	75	139.7	28.2	101.6	20.6	16	41.5	15	1.73
SSE99032	62	115	25	88	13	16	31.6	24	1.05
SSE99116	70	150	40	110	M20x2.5	28.2	37	11	1.67
SSE99117	70	150	40	110	17	28.2	37	11	1.72
SSE99201	62	115	40	88	13	16	31.8	9	1.23
SSE99203	75	171.5	42	130	19	29	45.8	11	2.65
SSE99273	75	171.5	42	130	19	29	45.8	19	2.65



SCHAUBLIN

ISO 9001-2003
EN 9100-2003

AQF-2
AS 9100-2004

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