



**Expertise**

## ***Enhanced performance products from Rexnord***

*Solutions for:*

- *Corrosion Resistance*
- *Freedom from Maintenance*
- *Maximum Service Life*
- *Highest Performance*

***RexAthletic***  
*Low-Maintenance*

***RexCarbon***  
*Maintenance-Free*

***RexPlus***  
*Corrosion and Acid Resistant*

***RexPlusAthletic***  
*Low-Maintenance, Rust and  
Acid Resistant*

***RexPlusCarbon***  
*Maintenance-Free,  
Corrosion and Acid Resistant*

## Special Strengths for Special Applications

With its enhanced product range RexPlusCarbon, RexPlusAthletic, RexPlus, RexCarbon and RexAthletic, Rexnord offers innovative roller chains with the highest service life and reliability for demanding applications in all industrial sectors. These new Rexnord expert chain types primarily call on several or all of the following technical and material innovations:

- **Stainless steel**
- **Seamless rollers**
- **High-tech thermoplastic sliding sleeves**
- **Food industry-safe lubrication**
- **Alloyed surfaces**
- **Anti-friction coating**

The right selection is the basis for a perfect and economic solution, so make use of Rexnord's special expertise. Every Rexnord chain can be individually produced for your application – with or without attachments.

	RexPro standard roller chain	RexAthletic	RexCarbon	RexPlus	RexPlus Athletic	RexPlus Carbon
<b>Properties of each chain:</b>						
<b>Chain size</b>	04 B - 72 B-3	08 B - 72 B-3	08 B - 16 B-2	08 B - 16 B-3	08 B - 16 B-3	08 B - 12 B-2
<b>Maintenance</b>	normal	light	mainte- nance-free	normal	light	mainte- nance-free
<b>Fatigue Strength</b>	100%	100%	100%	60%	60%	60%
<b>Tensile Strength</b>	100%	100%	100%	60%	60%	60%
<b>Acceptable Chain Joint Load</b>	100 %	100 %	50 %	50 %	50 %	50 %
<b>Chain Speed **</b>	up to 20 m/s	up to 20 m/s	up to 2 m/s	up to 4 m/s	up to 6 m/s	up to 2 m/s
<b>Corrosion and Acid Resistance</b>	no	no	no	yes	yes	yes
<b>Environmental Conditions</b>						
<b>Operating Temperature</b>	- 30 °C bis 130 °C *	0 °C bis 120 °C *	- 40 °C bis 100 °C	- 40 °C bis 120 °C *	- 40 °C bis 100 °C *	- 40 °C bis 100 °C
<b>Damp, Corrosive Environment</b>	limited	limited	limited	yes	yes	yes
<b>Dusty</b>	limited	yes	yes	limited	yes	yes
<b>Sanitary</b>	NSF H2	NSF H2	NSF H2	NSF H1	NSF H1	NSF H1

\* The temperature area can be broadened with special high or low temperature oils.

\*\* An appropriate lubrication method must be chosen depending upon the chain speed.

\*\*\* These values were measured on an application running with a shock-free load, a centre distance of 40 x pitch, and a number of sprocket teeth equal to  $z_1=21$ ;  $z_2=42$ . Further parameters can be calculated with Rexnord's chain calculation program Rex<sup>®</sup>Drive.



## **RexAthletic – Low-Maintenance Long-Lasting, Wear Resistant and Reliable**

**In many roller chain applications, maintenance and lubrication is extremely limited. The result is poor service life due to insufficient lubrication. This applies in particular to continuous systems where access to the chain is only possible under difficult conditions.**

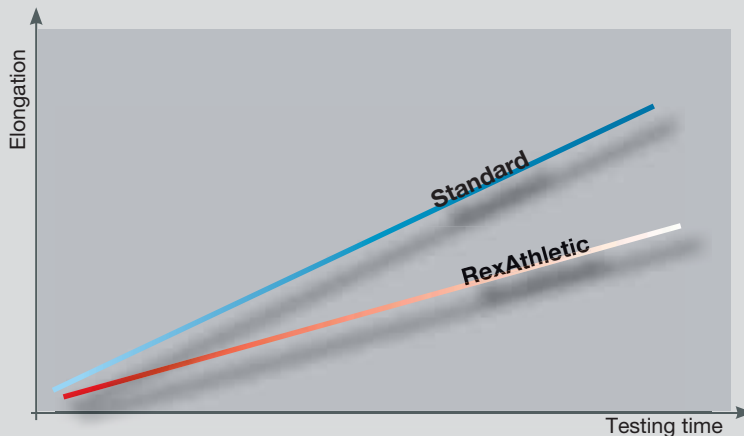
RexAthletic distinguishes itself through particularly good tribological properties. The alloyed coating

of the chain pin surfaces means that RexAthletic has very good sliding properties, as well as high wear resistance, even with inadequate lubrication. Maintenance requirements are further reduced through a special treatment of the bushings, which improves the maximum running properties. Due to this technical innovation, the interval between lubrication application can be lengthened considerably.

The product's outstanding characteristics are further optimized through the use of high quality, long-lasting lubrication applied in the factory. Because of the structural design of the lubrication, it can not be thrown off while operating at normal chain speed. RexAthletic is resistant to water and has a temperature range from 0 ° C to +120 ° C. The temperature range can be expanded with special low temperature oils upon request.

The fatigue strength of RexAthletic, as well as the transmittable tensile force, matches the quality of other Rexnord high performance roller chains. All dimensions of the chain are in accordance with DIN / ISO standards. Roller chains in the RexAthletic design are available in sizes 08 B to 72 B.

**Systematic Comparison of Elongation during Runtime  
Between a Standard Roller Chain and RexAthletic**



**The technically appropriate solution**

Specially developed chain links

**Substantial lengthening of maintenance interval**

Very good tribological properties through special coating of chain pins and bushings

**Good price/performance relationship**

Price appropriate and technically fitting solution



## RexCarbon - No More Lubrication!

**Fatigue resistant, high performance for critical areas**

In situations where lubrication is limited or impossible, RexCarbon fulfills many industrial application needs without reducing the chain's service life due to malfunctioning resulting from inadequate lubrication.

### No Need for Re-lubrication

RexCarbon has proven itself to be innovative and secure and is the perfect chain for medium load capacity and difficult conditions.

**Normally available from stock!**

#### Absolutely no lubrication

No contamination of goods or the environment

#### Enormously long service life

Achieved through use of optimized materials

#### Improved wear resistance

More robust due to the use of high-tech thermoplastic

#### Unique high-tech thermoplastic sliding sleeve

Innovative plastic takes over lubricating film function

#### Clear safety advantages

No fire-hazards resulting from oil or grease deposits

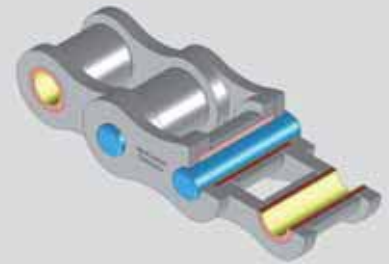
#### Low Noise

Reduces noise-level at workplace.

### Unbeatable Properties

In comparison to conventional chains with plastic sliding sleeves, RexCarbon offers the highest quality because of its high-tech thermoplastic sliding sleeves, leading to many technical advantages. Through the use of high-tech carbon bushings, high fatigue strength is reached. In contrast to a normal standard chain, RexCarbon achieves an 18 times higher resistance to wear. For more information, please see pages 6 and 22 of the Quality Chain catalog, or contact Rexnord's application engineers.

### Construction of RexCarbon



- Case hardened steel
- High-tech thermoplastic sliding sleeve
- Case hardened steel

### Recommended Chain Tensile Force at selected speeds\*\*\*

Chain Type	Temperature range - 40 °C to + 80 °C, acceptable tensile force				Temperature range + 80 °C to + 100 °C, acceptable tensile force	
	N up to 0,5 m/s	N 1,0 m/s	N 1,5 m/s	N 2,0 m/s	N up to 0,5 m/s	N 1,0 m/s
08 B-1 CB	850	750	650	500	680	600
10 B-1 CB	1100	1000	900	670	880	800
12 B-1 CB	1500	1300	1100	890	1200	1040
16 B-1 CB	3500	3100	2700	2100	2800	2480
08 B-2 CB	1500	1300	1100	900	1200	1000
10 B-2 CB	1900	1800	1600	1200	1500	1400
12 B-2 CB	2600	2300	1900	1600	2100	1800
16 B-2 CB	6100	5400	4700	3700	4900	4300



## RexPlus – Extremely Corrosion and Acid Resistant Heat – Corrosion – Liquids – Foodstuffs – Hygiene

Rexnord's proven generation of corrosion and acid resistant roller chains fulfill the highest demands with regards to quality, dependability and service life.

Where flowing water is a factor or strict hygienic conditions and corrosion-free material are needed, RexPlus offers superior performance. When normal chain speeds reach approximately 1.5 m/sec., Rex-

Plus can handle the pace – even under extreme loads – better than conventional stainless steel chains. It can withstand temperatures as low as – 40 ° C and up to + 400 ° C, as well as steam, water and abrasive liquids. Through the use of new materials and consistent further developments, RexPlus clearly breaks through the constraints of customary stainless steel chains.

### Consistent use of stainless steel and modern production methods

The RexPlus link plates are manufactured from a patented special steel, while the bushing material is high strength austenitic steel. The extraordinary wear resistance of the bushings is achieved through a cold hardening process.

The hardened and tempered chain pins manufac-

tured from ferritic corrosion and acid resistant steel are passivated after a heat treatment.

RexPlus is equipped with seamless, cold formed rollers and then treated with a high performance chain oil, which is permitted to be in direct contact with foodstuffs (approval NSF H1). For more information, please see pages 6 and 24 in the Quality Chain catalog, or contact Rexnord's application engineers.

**Recommended Chain Tensile Force at selected speeds\*\*\***

Chain Type	Temperature range -40 °C to + 200 °C, acceptable tensile force				Temperature range + 200 °C to + 400 °C, acceptable tensile force	
	N up to 0,5 m/s	N 1,0 m/s	N 1,5 m/s	N 2 m/s	N up to 0,5 m/s	N 1,0 m/s
08 B-1 SS	850	750	650	500	530	470
10 B-1 SS	1100	1000	900	670	690	630
12 B-1 SS	1500	1300	1100	890	940	810
16 B-1 SS	3500	3100	2700	2100	2200	1900
08 B-2 SS	1500	1300	1100	900	900	800
10 B-2 SS	1900	1800	1600	1200	1200	1100
12 B-2 SS	2600	2300	1900	1600	1600	1400
16 B-2 SS	6100	5400	4700	3700	3800	3400
08 B-3 SS	2100	1900	1600	1300	1300	1200
10 B-3 SS	2800	2500	2300	1700	1800	1600
12 B-3 SS	3800	3300	2800	2200	2400	2100
16 B-3 SS	8800	7800	6800	5300	5500	4900

**Normally available from stock!**

### Extremely corrosion and acid resistant

Highest standard for roller chains

### Maximum Hygiene

Absolute cleanliness via seamless rollers

### Improved wear resistance

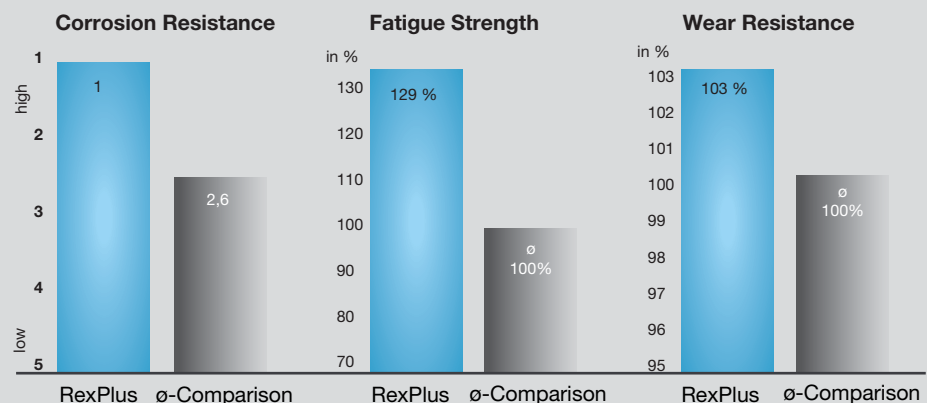
High performance material used for components

### High-performance lubrication ex works

Resistant to water and steam



## RexPlus – Considerably higher performance in direct comparison



## RexPlusAthletic – Low-Maintenance and Resistant to Corrosion

### The wear resistant and reliable stainless steel chain

**By combining both RexAthletic and RexPlus chains, a low-maintenance stainless steel chain was created that maintains its high tensile force even with little maintenance**

The use of stainless steel and special chain pins creates an operationally reliable and corrosion resistant chain that has unlimited functionality in a temperature range from -40°C to

+200°C, but can also operate in a temperature range of +200°C to +400°C with certain restrictions.

RexPlusAthletic distinguishes itself through particularly good tribological properties. The alloyed coating of the chain pin surfaces means that RexPlusAthletic has very good sliding properties, as well as high wear resistance, even with inadequate lubrication. Maintenance requirements

are further reduced through a special treatment of the bushings, which improves the maximum running properties. Due to this technical innovation, the interval between lubrication applications can be lengthened considerably.

The link plates are manufactured from a patented special steel, while the bushing material is high strength austenitic steel. The extraordinary wear re-

sistance of the bushings is achieved through a cold hardening process.

The fatigue strength of RexPlusAthletic, as well as the transmittable tensile force, matches the quality of RexPlus. All dimensions of the chain are in accordance with DIN / ISO standards.

For more information, please contact Rexnord's application engineering.

**Recommended Chain Tensile Force at selected speeds\*\*\***

Chain Type	Temperature range -40 °C to + 200 °C, acceptable tensile force				Temperature range + 200 °C to + 400 °C, acceptable tensile force	
	N up to 0,5 m/s	N 1,0 m/s	N 1,5 m/s	N 2 m/s	N up to 0,5 m/s	N 1,0 m/s
08 B-1	850	750	650	500	530	470
10 B-1	1100	1000	900	670	690	630
12 B-1	1500	1300	1100	890	940	810
16 B-1	3500	3100	2700	2100	2200	1900
08 B-2	1500	1300	1100	900	900	800
10 B-2	1900	1800	1600	1200	1200	1100
12 B-2	2600	2300	1900	1600	1600	1400
16 B-2	6100	5400	4700	3700	3800	3400
08 B-3	2100	1900	1600	1300	1300	1200
10 B-3	2800	2500	2300	1700	1800	1600
12 B-3	3800	3300	2800	2200	2400	2100
16 B-3	8800	7800	6800	5300	5500	4900

**The technically appropriate solution**

Specially developed chain links

**Substantial lengthening of maintenance interval**

Very good tribological properties through special coating of chain pins and bushings

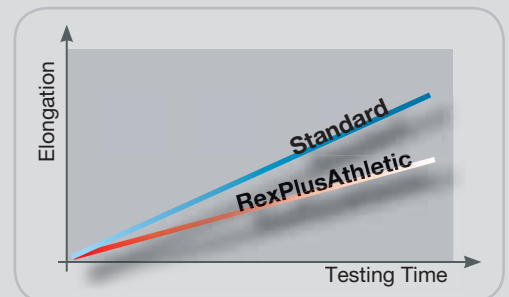
**Extremely corrosion and acid resistant**

Highest standard for roller chains

**Maximum Hygiene**

Absolute cleanliness via seamless rollers

**Systematic Comparison of Elongation during Runtime Between a Standard Roller Chain and RexPlusAthletic**



# RexPlusCarbon - Maintenance-Free and Corrosion Resistant

## The Maintenance-Free Stainless Steel Chain

**RexPlusCarbon combines the strengths of both RexPlus and RexCarbon in order to meet the industry requirements for a completely maintenance-free and corrosion resistant chain.**

In temperatures of up to +100 ° C, RexPlusCarbon will perform successfully where freedom from maintenance and load capacity are concerned. By optimizing RexPlus ma-

terials and using patented special steel for the plates, RexPlusCarbon achieves corrosion and acid resistance.

High-strength sleeves manufactured from high-tech thermoplastic, bushings manufactured from cold hardened austenitic steel, as well as extraordinarily wear resistant pins make RexPlusCarbon a versatile, all-purpose chain. RexPlusCarbon also exhibits

high elasticity compared to conventional chains with plastic sleeves.

With its optimized configuration, RexPlusCarbon is especially qualified for critical applications, for example, in the food and confectionery industries, in the bottling and drink industries, as well as in the automobile and packaging industries. For more information, please contact Rexnord's application engineers.

**Normally available from stock!**

**Absolutely no lubrication**  
No contamination of goods or environment

**Corrosion Resistant**  
Highest standard for roller chains

**High Performance**  
Superior strength of all components

**Highest Cleanliness**  
Problem-free cleaning possible

**High Performance Lubrication Ex-works**  
Perfect for food industries and low temperatures

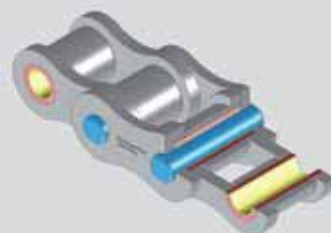
**Long Service Life**  
Wear-optimized chain links

**Recommended Chain Tensile Force at selected speeds\*\*\***

Chain Type	Temperature range - 40 °C to + 80 °C, acceptable tensile force				Temperature range + 80 °C to + 100 °C, acceptable tensile force	
	N up to 0,5 m/s	N 1,0 m/s	N 1,5 m/s	N 2 m/s	N up to 0,5 m/s	N 1,0 m/s
08 B-1 SS CB	850	750	650	500	680	600
10 B-1 SS CB	1100	1000	900	670	880	800
12 B-1 SS CB	1500	1300	1100	890	1200	1040
08 B-2 SS CB	1500	1300	1100	900	1200	1000
10 B-2 SS CB	1900	1800	1600	1200	1500	1400
12 B-2 SS CB	2600	2300	1900	1600	2100	1800



### Construction of RexPlusCarbon



- High strength quality steel
- High-tech thermoplastic sliding sleeve
- High strength quality steel
- RexPlus material





**RexAthletic**  
*Low Maintenance*

RexAthletic is the long-lasting, wear-resistant, low maintenance roller chain with specially developed chain links. It is particularly appropriate for applications where regular maintenance and lubrication is limited, for example, for chains in revolving storage systems, escalators, as well as in drive chains in difficult-to-reach areas.



**RexCarbon**  
*Maintenance-Free*

Forget about lubrication with RexCarbon. The high-tech thermoplastic sliding sleeve ensures the chain is completely maintenance-free without reducing the service life due to corrosion of the chain links. RexCarbon offers strong performance in all areas where regular maintenance is difficult.



**RexPlus**  
*Extremely Corrosion  
and Acid Resistant*

RexPlus is the proven corrosion and acid resistant roller chain that satisfies the highest demands on quality, dependability and service life. Through the use of new materials and consistent further development, RexPlus shows its superiority over all other conventional stainless steel chains.



**RexPlusAthletic**  
*Low maintenance, rust  
and acid resistant*

The low maintenance stainless steel chain is a combination of the RexAthletic and RexPlus chains. It is highly wear resistant, reliable and maintains a high tensile force with a low amount of maintenance.



**RexPlusCarbon**  
*Maintenance-Free,  
Corrosion and Acid  
Resistant*

RexPlusCarbon is the first chain that is permanently maintenance-free and corrosion and acid resistant, thereby combining the strengths of RexPlus and RexCarbon. High resistance to wear and optimized elasticity enable permanent precision and security in all applications.



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