### Aftermarket price, OE quality



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ESEN company, the owner of the SKV brand



PRODUCT GROUP

### What is the function of a timing chain in an engine?

A timing chain's role is to synchronize the rotation of the crankshaft with the camshafts, allowing the engine valves to open and close precisely. It is an **indispensable element of the drive system** of a four-stroke engine. Its main task is to control both intake valves through which the fuel-air mixture (or air, in the case of direct injection engines) is supplied to the cylinder and the exhaust valves responsible for the discharge of exhaust gases from the engine compartment. Therefore, a timing chain is essential to **quarantee optimal engine** performance and efficiency.

### Types of timing chains.

Inner link plat

Outer link pla

Inner link plate

Outer link plat

Pin link plate

Guide link plate

A ROLLER CHAIN

A BUSHED CHAIN

A SILENT/LEAF CHAIN

It is worth noting that there are various types of timing chains, and they all play an essential role in driving the camshafts, which are responsible for controlling the engine's valves. Let's imagine how significant loads these chains must carry, becoming an indispensable element of the drive unit of a vehicle. The timing chains are commonly divided into three main categories based on their construction: **roller chains. bushed chains.** resembling classic drive chains, and **the so-called silent leaf chains.** The latter, made exclusively of plates, are characterized by superior durability and are currently widely used in higher-performance, more powerful four-stroke engine units.

durability and NVH properties.



The usage of cold-forged bushings guarantees exceptional durability and wear resistance.



ESEN company, the owner of the SKV brand.

A 5-year warranty or 100.000 kilometers







The SKV timing chain kits features



Heat Resistance High temperature resistance



Strong & durable Durable and resistant to harsh conditions



Completeness All necessarv elements included



Anti-Corrosive Corrosion-resistant



covered

The so-called "quiet" chains are characterized by excellent NVH performance and increased durability. They are installed mainly in modern, high-performance petrol engines.

especially under heavy loads.

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In the automotive industry, the NVH abbreviation stands for the three main factors related to comfort and acoustic quality in vehicles - Noise, Vibration, and Harshness.

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### What are the reasons for choosing the SKV timing kits?

Our offer comprises over **200** distinct models of timing kits.

- The robust SKV timing kits are available in **the most prominent automotive wholesalers's offer** from 2021.
- The SKV parts are manufactured with the same quality and on the same production lines as the timing kits **used in the first assembly.**
- All parts of a timing kit, from the chain to the tensioner, are subjected to **rigorous tests and thorough quality checks.**

We offer a **5-YEAR WARRANTY** or 100,000 kilometers covered without a need for additional fees or registration.

Modern production lines and high-quality materials used to produce **SKV parts guarantee** that the entire range of products always meets the most demanding European and global standards.

### Here are some details about the SKV timing kit elements:

The SKV roller chains are exceptionally robust and durable while maintaining low noise and load levels.

**The SKV bushed chains** are outfitted with cold-forged bushes, providing superior robustness and durability.

**The quiet leaf SKV chains** additionally improve acoustic properties, which translates into the comfort of use.

The SKV tensioners are precisely tuned to control chain tension, ensuring optimal chain function.

The SKV guides (slides) are available in a wide range of materials to meet a variety of applications.

The SKV chain wheels (sprockets) have been designed for optimal noise reduction, which impacts the comfort of use.



A chain





group 21 sкv

### Build guality, materials, and kit elements

#### TIMING CHAIN COMPONENTS

01	Camshaft chain
02	Balancer shaft chain
03	Crankshaft chain wheel (sprocket)
04	Water pump chain wheel (sprocket)
05	Timing chain guide
06	Balance shaft chain wheel (sprocket)
07	Balance shaft chain tensioner
08	Balance shaft chain wheel (sprocket)
09	Crankshaft chain wheel (sprocket)
10	Balance chain guide (right)
11	Balance chain guide (upper)
12	Timing chain guide
13	Timing chain tensioner
14	Timing chain guide
15	Mounting screws
16	Camshaft sealant
17	Timing cover gasket

#### **Timing Chain**

Commonly it is made of high-quality hardened steel or special metal alloys. Steel is the preferred material due to its durability, stress- and wear resistance. During operation, the chain is immersed in oil lubricating it to reduce friction, extend its service life, and reduce noise.



Chain guides

Play a crucial role in maintaining the correct

tension and timing chain guidance. The slides are made of durable and robust materials,

composite materials.



#### Chain wheels/ Sprockets

(also called timing chain wheels) convert the linear motion of a chain into the rotational motion of an element to which it is attached. In a timing system, they act as a drive for a crankshaft, camshafts, balance shafts, oil pump, and other engine parts. They are made of various materials, including sintered metal.





#### **Gaskets and sealants**

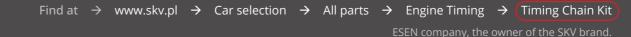
Play a key role in preventing oil and other fluid leaks, which is crucial for the proper operation of the engine and its durability. They are made of materials resistant to aging, high temperatures, and oils.

#### Mounting screws

Are components used to attach the timing system components to the engine. They are made of high-quality steel with increased durability. Installation of screws requires accuracy and appropriate tightening torque.







**Chain tensioners** 

Maintain proper timing chain tension, ensuring synchronization of the camshaft,

crankshaft, and engine valves. There are two

types of tensioners: mechanical, which uses a spring, and hydraulic, regulated by the oil pressure.

Quality assured

# THE SKV TIMING CHAIN KITS

Depending on the model and application, **various models of SKV timing kits** are available. Despite the differences, their operating principle and purpose remain the same. Below are some of the variants offered



#### The 21SKV107 timing kit consists of

- Camshaft chain • Chain wheels (sprockets)
- Chain guide with tensioner



#### The 21SKV220 timing kit consists of

- Camshaft chain
- Chain wheels (sprockets)
- Timing chain guides
- Tensioner
- Mounting screws
- Timing cover gasket + sealant



### The 21SKV187 timing kit consists of • Camshaft chain

- Balance shaft chain
- Chain wheels (sprockets)
- Timing and balance chain guides
- Tensioners



#### The 21SKV206 timing kit consists of

- Camshaft chain
- Chain wheels (sprockets)
- Timing chain guides
- Timing chain tensioner
- Sealant



#### The 21SKV117 timing kit consists of

- Camshaft chain
- Chain wheels (sprockets)
- Timing chain guides
- Mounting screws
- Sealant
- Timing cover gasket



All elements of SKV timing kits are manufactured with adherence to the highest quality at every stage of production. Our products meet the most stringent **WORLD QUALITY STANDARDS**, guaranteeing their reliability. For this reason, we offer an extended 5-year FREE WARRANTY, which confirms confidence in the durability and performance of SKV products.











It is advisable to regularly monitor the timing state, including testing the chain for stretching and checking the gears, slides, and tensioner. The presence of metal filings on the cover may be a signal to replace the entire timing chain set. **Symptoms of wear** also include noise from the timing area and deteriorating engine operation. In modern vehicles, the need for intervention may be signaled by the illuminated **"check engine"** light.

Compared to a timing belt, **timing chain failures are rare**, but their occurrence may result in the need to replace the entire engine.

According to automotive experts, a chain-based timing drive system is considered far more reliable than belt-operated units. Currently, the lifespan of a chain depends mainly on the durability of the tensioner, and the average stands **at around 200-300 thousand kilometers.** 

At the same time, some car manufacturers recommend replacing the chain more frequently, predominantly for smaller-capacity engines. The intensity of vehicle use also **affects the durability** of this part.

To maximize the lifespan of a timing chain, it is recommended to use engine oil with **\*SAE specification in accordance with the requirements** of a car manufacturer, for example, 5W30. It should be done in tandem with changing the engine oil and filter regularly (for example, every 15,000 km or annually) and **monitoring the engine oil level**, topping it up when necessary.

# The SKV timing chain kit references start with number 110 in the 21SKV group.



Category Manufacturer number code

Product number

#### **\*\*SAE (Society of Automotive Engineers) viscosity classification** It is a system that determines the viscosity of engine oils. This scale is based on two numbers - the first number being the viscosity at low temperatures and the second being the viscosity at high temperatures. A lower first number indicates better cold flow properties for smoother engine starting, while a higher second number indicates high-temperature viscosity for optimal engine protection.



group 21 skv

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Maintenance

# SKV BRAND STRENGTHS





### OVER 30,000 references

### OVER 100 product groups

SKV's diverse range is designed to maximize profitability for its customers.

• made to the same rigorous manufacturing standards as OE counterparts;

• manufactured on the same production lines as parts from the world's leading manufacturers;

Ask your distributor for more details.

The SKV products are factory-new parts:

subjected to the same quality controls as OE parts







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