

SCHAEFFLER



The INA Belt Portfolio

So that everything runs smoothly



Always working harder: The Front End Auxiliary Drive

The constantly increasing expectations for driving comfort and stricter statutory regulations on CO₂ emissions have both had a huge impact on the front end auxiliary drive (FEAD):

- More and more aggregates need to be driven – such as the water pump, A/C compressor, steering pump and alternator.
- Engines are becoming ever more compact, requiring more complicated belt paths and a higher power transmission.
- Increasing amounts of oscillations and vibrations have to be counteracted in order to keep wear to a minimum.

The conventional V-belt is suitable for these demands only under specific conditions. The result is the evolution of the V-belt into the more powerful multi-ribbed belt, which can be found in over 95 % of all new vehicles today.



Development of the Front End Auxiliary Drive



Today

A/C compressor, steering pump, starter alternator for 48-V systems – an even greater load is placed on the front end auxiliary drive.



1990s

An additional air conditioner compressor further increases the demand on the front end auxiliary drive.



1970s

In addition to the generator, the steering pump and water pump also have to be driven.



1960s

The crankshaft drives the alternator via a V-belt.

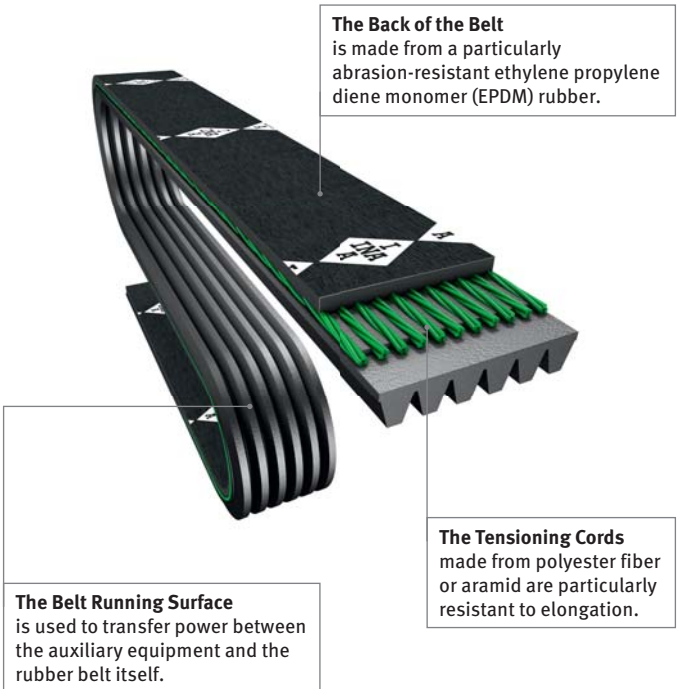
State-of-the-Art Technology: The INA Multi-Ribbed Belt

Unlike the conventional V-belt, the multi-ribbed belt has a flat design and several ribs that run vertically along the belt – in certain applications these ribs can even be found on both sides.

The advantages:

Multi-Ribbed Belts from INA

- can transfer larger forces
- can withstand higher loads
- are more flexible
- enable much narrower wrap angles
- can be used to drive multiple aggregates in confined spaces



A Helping Hand for Installation: The INA Belt Designation

INA multi-ribbed belts are available in a variety of widths, types and lengths so that a properly fitting belt can be installed in a wide range of vehicles. The number of ribs and the width of the belt will vary depending on the torque being transferred.

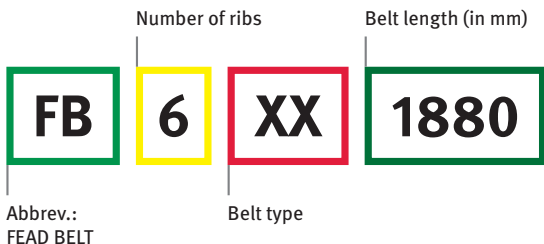
INA Belt Designation in Detail



Possible Abbreviations for INA Belt Types:

PK	XPK	APK
PK = standard:	X = extra:	A = BAS (Belt Alternator Starter):
For conventional belt drives	For complex belt drives	For belt drives with a starter alternator
Including for belt drives with start/stop function using a starter (pinion starter)	Special design, e. g. aramid tensioning cord, special ribbed material Suitable for belt drives with start/stop function (pinion starter) Enables very small deflections and high bending cycles	Silent and vibration-free restarts throughout the entire service life

All INA multi-ribbed belts are clearly and unambiguously marked so that the required belt can be identified rapidly and reliably, this is an effective method of avoiding potential faults when installing the belt.



DPK

EPK

D = double:

For compact belt drives

Belt with double-sided ribbed profile

Aggregates are driven with the front side and reverse side of the belt

E = elast:

For belt drives with no belt tensioner

Specially designed tension members for maximum tension retaining ability

Requires a special installation tool

In OE quality: The INA Belt Portfolio

So that the belts in front end auxiliary drives can be replaced as easily as possible, INA offers a market-leading portfolio of high-quality V-belts and multi-ribbed belts.

INA V-Belt

It is only fitted in 5 % of all new vehicles, but is still hugely important for older vehicles.



INA Multi-Ribbed Belt

Available in a variety of widths, types and lengths.



INA FEAD KIT

The solution for making comprehensive repairs to the front end auxiliary drive. With all of the components needed for a replacement (tailored to the particular type of vehicle).



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