



CONTI[®]V FO PIONEER

On the Safe Side with the Second Generation

Industry Segment Sectors

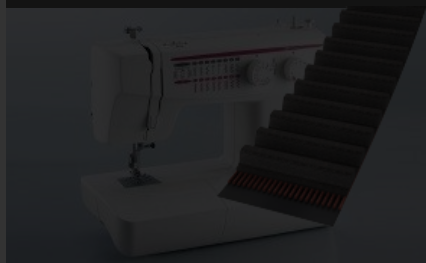
CONTI[®]V FO PIONEER

ContiTech

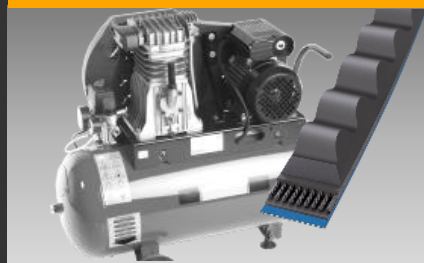
Materials handling



Household appliances



Compressors



Textile machinery



Printing machinery



2-wheelers



Garden machinery



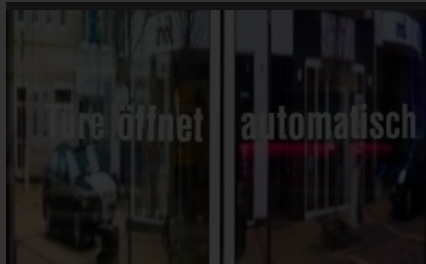
Gym equipment



Agriculture



Door-opening systems



White goods industry



Elevators



CONTI®V FO PIONEER

Improved Properties of the Second Generation

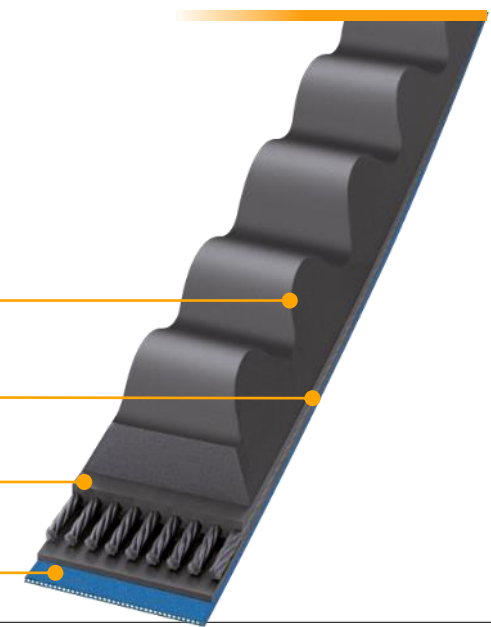
- Output increased by 5.5% compared with 1st generation
- Increased durability thanks to harder-wearing compound
- Maintenance-free
- PAH category 2 acc. to “2014 AfPS GS:01 PAK”
- Temperature-resistant from -40°C to +130°C, application-specific



- Excellent flexibility thanks to optimized molded teeth
- Especially smooth running
- Matched-set L=L as standard
- Electrically conductive to ISO 1813
- Moderately oil-resistant



- Base body made of especially hard-wearing, fiber-reinforced EPDM
- Extremely tough embedding compound
- Reinforced polyester tension member
- Cotton cover fabric



Pulley Diameters and Tooth Geometry

- › 2nd generation continues to use optimized CONTI[®] tooth shape for best flexibility even with reverse idlers
- › Competitors' conventional tooth shapes result in cracks in the tooth root with small pulley diameters



Optimized tooth shape



Competitors' tooth shape



Min. pulley diameter [mm]

Belt	XPZ/3VX	XPA	XPB/5VX	XPC
CONTI [®] V FO PIONEER	50	63	100	160
Competitor 1	56	80	112	180
Competitor 2	56	71	112	180



Minimum pulley diameters with CONTI[®]V FO PIONEER

Motivation to Reduce PAH Level



- › Stricter EU requirements for products containing PAHs are to be expected
- › GS test mark and CE mark confirm CONTI[®]V FO PIONEER meets limits

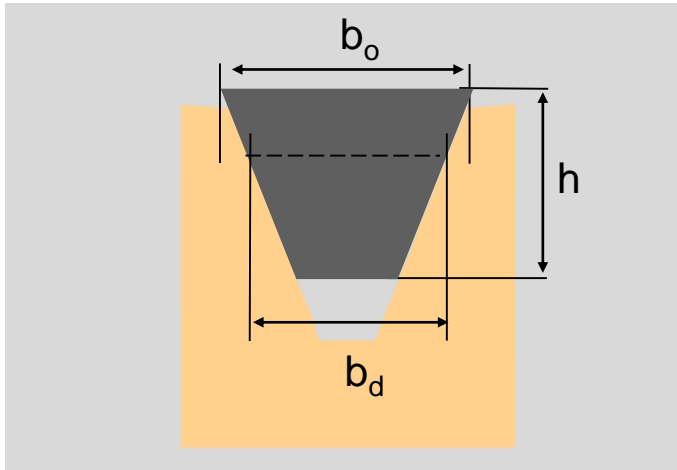
On the safe side with the CONTI[®]V FO PIONEER:

- › Clean operation of air supply systems:
 - › Ventilation systems
 - › Compressors
- › No problem in passing product tests for household applications and garden machinery:
- › Protection for people in event of extended contact with belt



CONTI[®]V FO PIONEER

Profile Geometry and Lengths



Profile / section		XPZ/3VX	XPA	XPB/5VX	XPC
Top belt width	$b_0 \approx$ (mm)	9.8	13.1	16.3	22
Belt height	$h \approx$ (mm)	8	9	13	18
Pitch width	$b_d \approx$ (mm)	8.5	11	14	19
Length range	$l_w \approx$ (mm)	512 - 2840	590 - 2932	1000 - 2900	1900 - 2900

CONTI[®]V FO PIONEER

Belt Nomenclature

ContiTech

	CONTI [®] V FO PIONEER	XPB 2800 Ld / 5VX 1105	L=L	MADE IN SLOVENIA	antistatic ISO 1813	200218 11	
	CONTI [®] V FO PIONEER	XPB 2800 Ld / 5VX 1105	L=L	MADE IN SLOVENIA	antistatic ISO 1813	200218 11	
	CONTI [®] V FO PIONEER	XPB 2800 Ld / 5VX 1105	L=L	MADE IN SLOVENIA	antistatic ISO 1813	200218 11	
	CONTI [®] V FO PIONEER	XPB 2800 Ld / 5VX 1105	L=L	MADE IN SLOVENIA	antistatic ISO 1813	200218 11	

Product line

Profile and
belt effective
length

Production date
and location

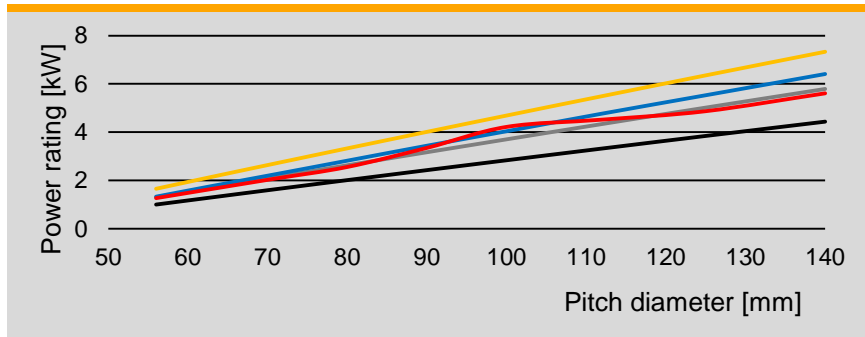
Market Situation – State of the Art

	CONTI®V FO PIONEER	Competitor 1	Competitor 2
Tension member	Polyester	Polyester	Polyester
Polymer	EPDM	EPDM	CR

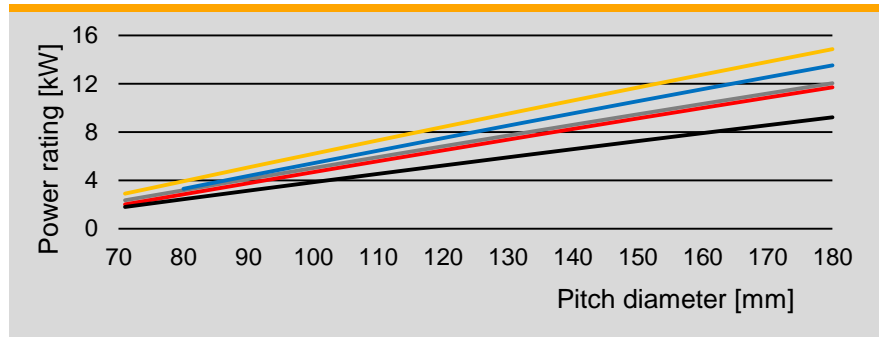
- › The use of state-of-the-art EPDM materials ensures maximum lifetime, operational capability and temperature resistance
- › Characteristics of CR:
 - › Resistant to continuous temperatures from -30°C to +90°C
 - › Lower power rating
 - › Shorter lifetime
- › Advantages of EPDM:
 - › Resistant to continuous temperatures from -40°C to +130°C
 - › Extremely high power rating
 - › Maximum lifetime

Competitor Comparison, General: Power Rating

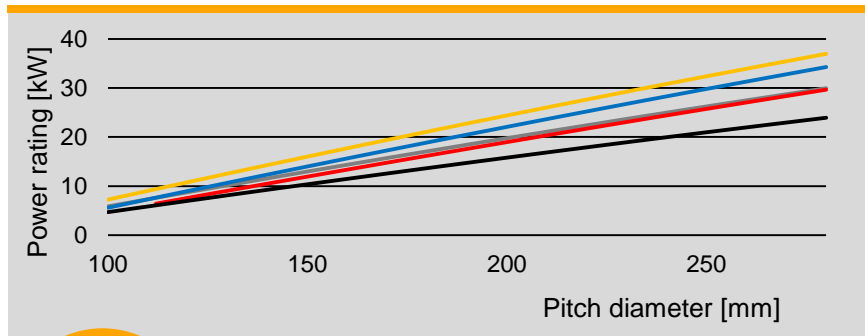
XPZ power ratings



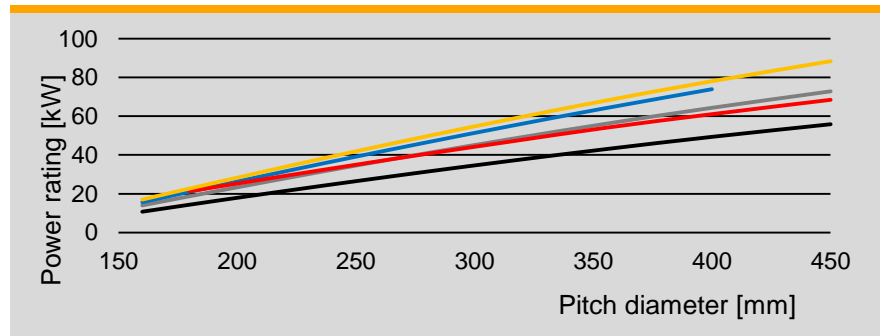
XPA power ratings



XPB power ratings



XPC power ratings



— CONTI[®]V FO ADVANCE — Competitor 1 — Competitor 2 — CONTI[®]V FO — CONTI[®]V FO PIONEER

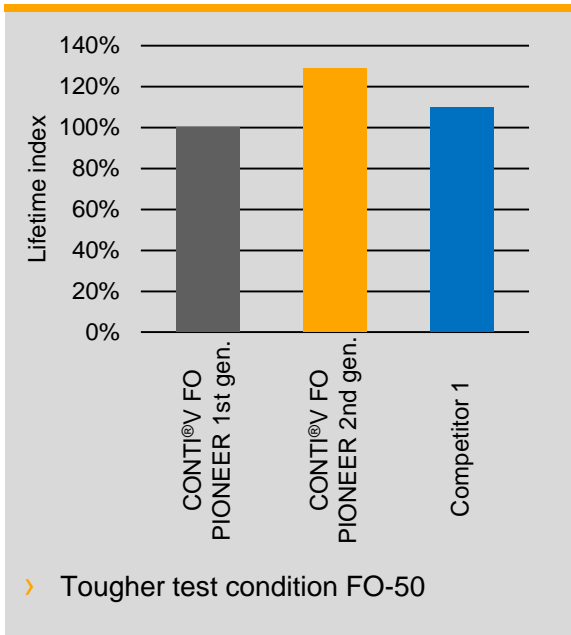


Power rating

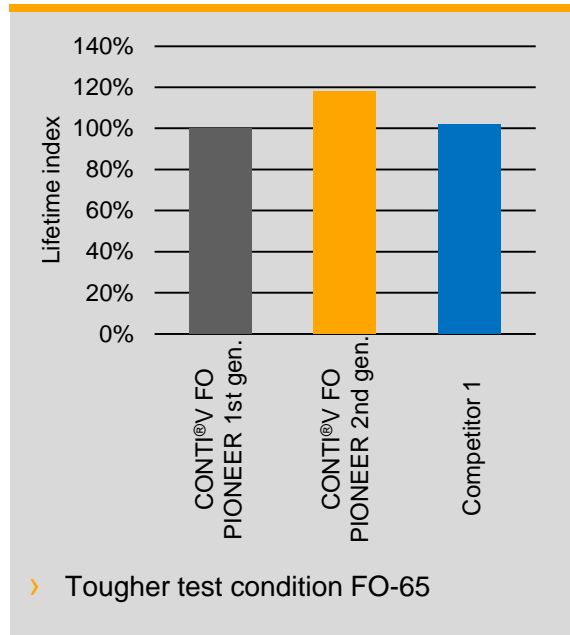
CONTI[®]V FO PIONEER – unmatched power transmission

Competitor Comparison, EPDM: Lifetime

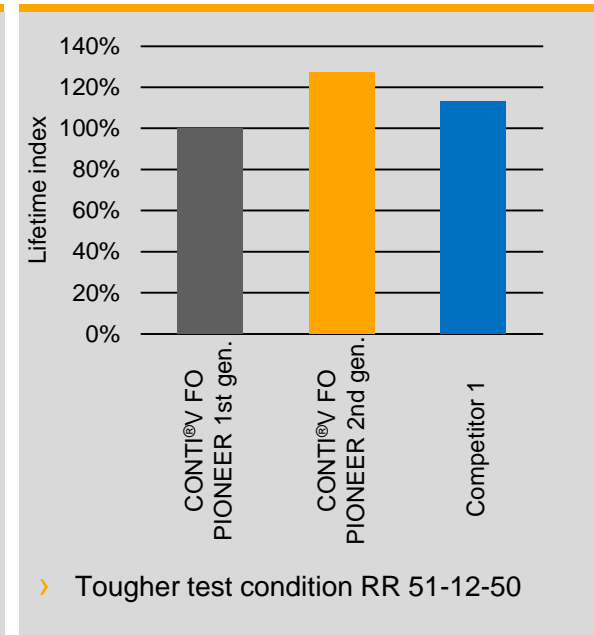
XPZ lifetime



XPA lifetime



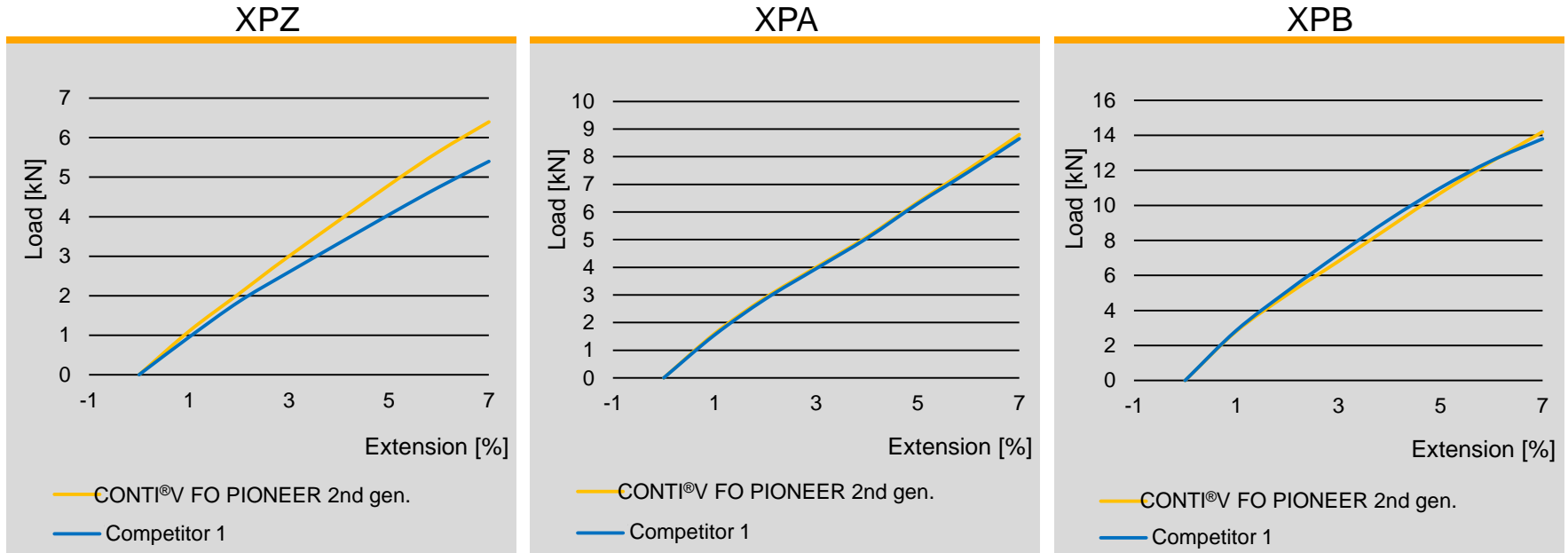
XPB lifetime



Lifetime

CONTI®V FO PIONEER – longer life than ever before!

Competitor Comparison, EPDM: Load-Extension Properties



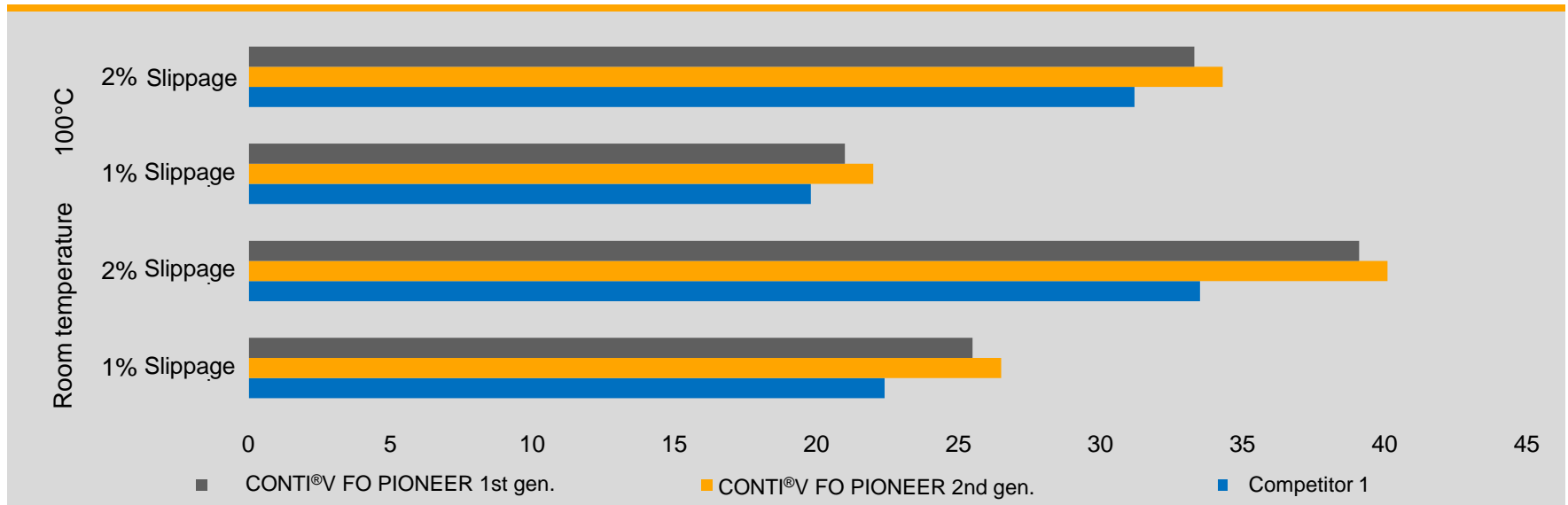
Load-Extension Properties

CONTI®V FO PIONEER – the ultimate power design!

Competitor Comparison, EPDM: Torque transmission



Torque transmission with slippage



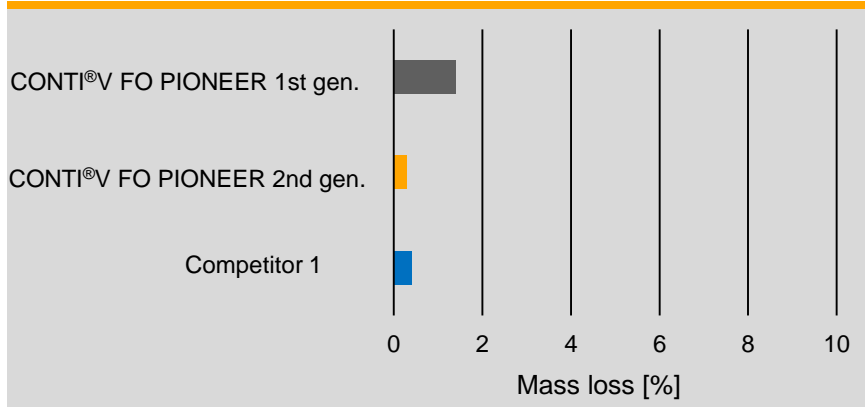
Safe torque transmission even with slip and at high temperatures

CONTI®V FO PIONEER – the most efficient V-belts on the market

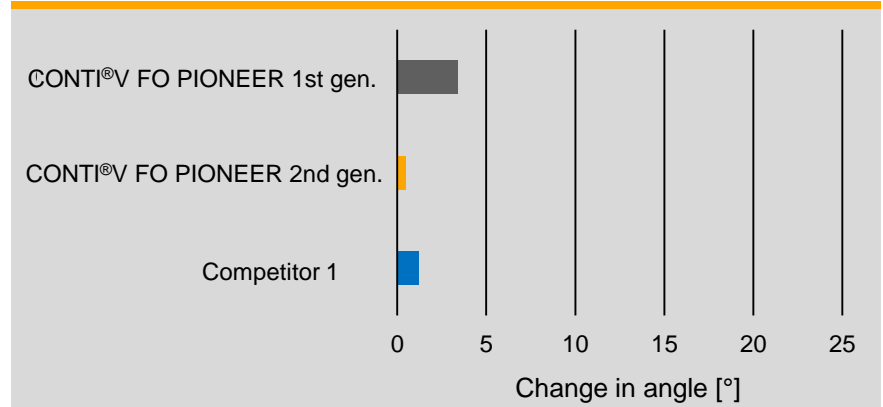
Competitor Comparison, EPDM: Abrasion Properties



Mass loss / abrasion after test period



Flank angle error after test period



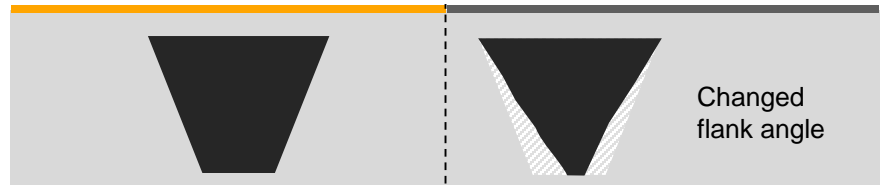
Cross-section before

Cross-section after



Cross-section before

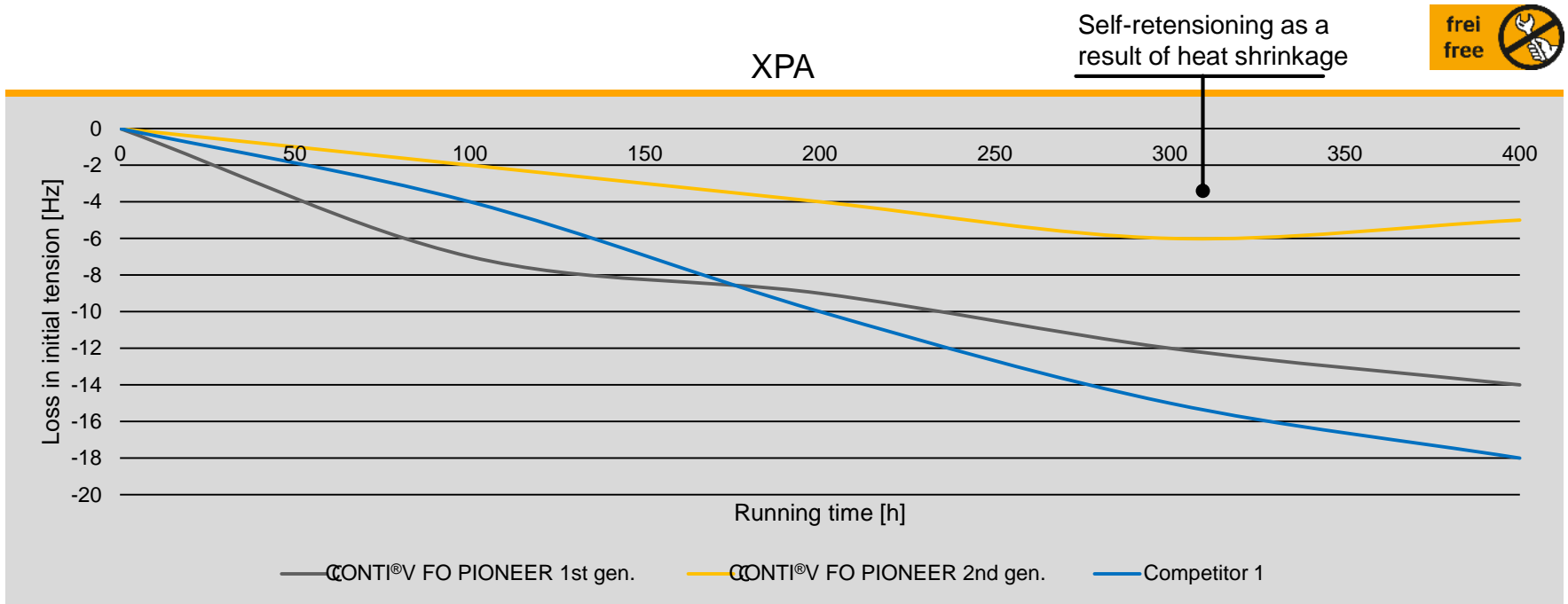
Cross-section after



Abrasion Properties

CONTI®V FO PIONEER – maintenance-free thanks to outstanding dimensional stability









Competitor Comparison, EPDM: Loss in Initial Tension



Loss in initial tension

CONTI®V FO PIONEER – the truly maintenance-free V-belt solution

Competitor Comparison, EPDM: Summary

Attribute	CONTI®V FO PIONEER	Competitor 1
Power ratings		
Lifetime		
Load-extension		
Efficiency / torque transmission		
Abrasion		
Angle error as a result of abrasion		



CONTI®V FO PIONEER – the benchmark for raw-edge V-belts

On the Safe Side with the Second Generation



Power › More powerful and reliable than ever before

Abrasion resistance › More efficient and affordable operation

Maintenance-free › No downtimes or maintenance until failure

PAHs › Future requirements can be met

Temperature › Can be used in even more application fields



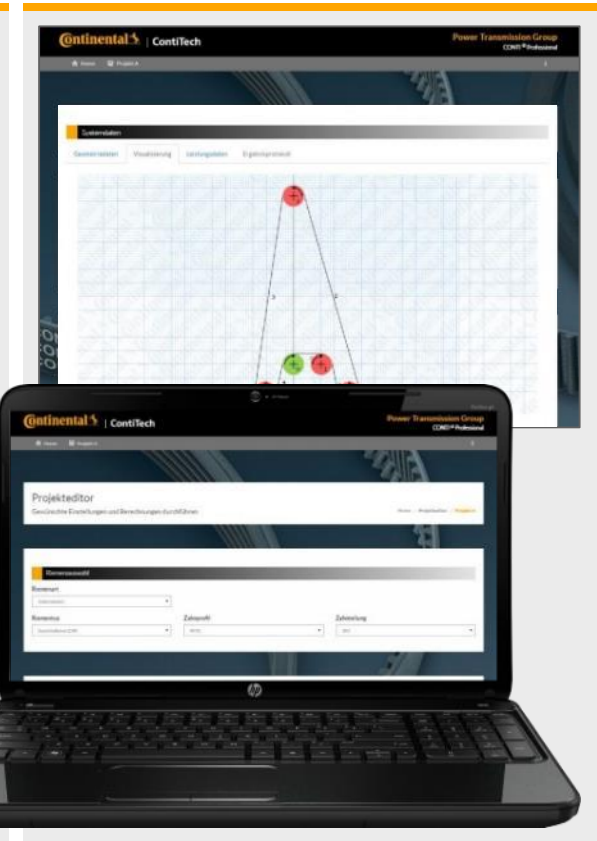
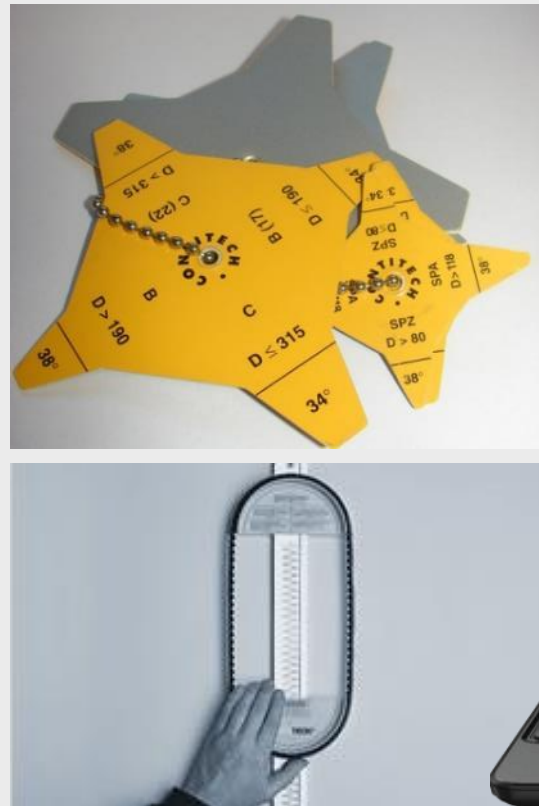
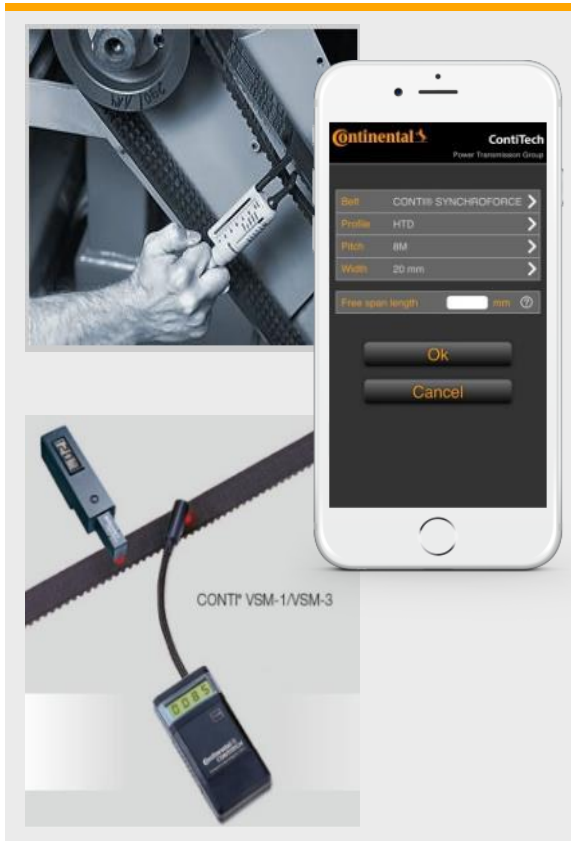
Verdict

› The best V-belt on the market

Tension gauges /
Android / iOS app

Measuring gauges

CONTI® Professional



Full service – anywhere, anytime

- › Worldwide availability of premium-quality products
- › Design software / product configurators
- › Technical support
- › Advertising material
- › “ContiEducate” training
- › Trade shows and exhibitions



Thank you
for your attention!

WNGER IST MHR.

Industrial Drive Belts from ContiTech
The Trendsetter with Lower PAHs



Industrial Drive Belts from ContiTech

ContiTech

Power Rating of V-Belts and Multiple V-Ribbed Belts



High Performance

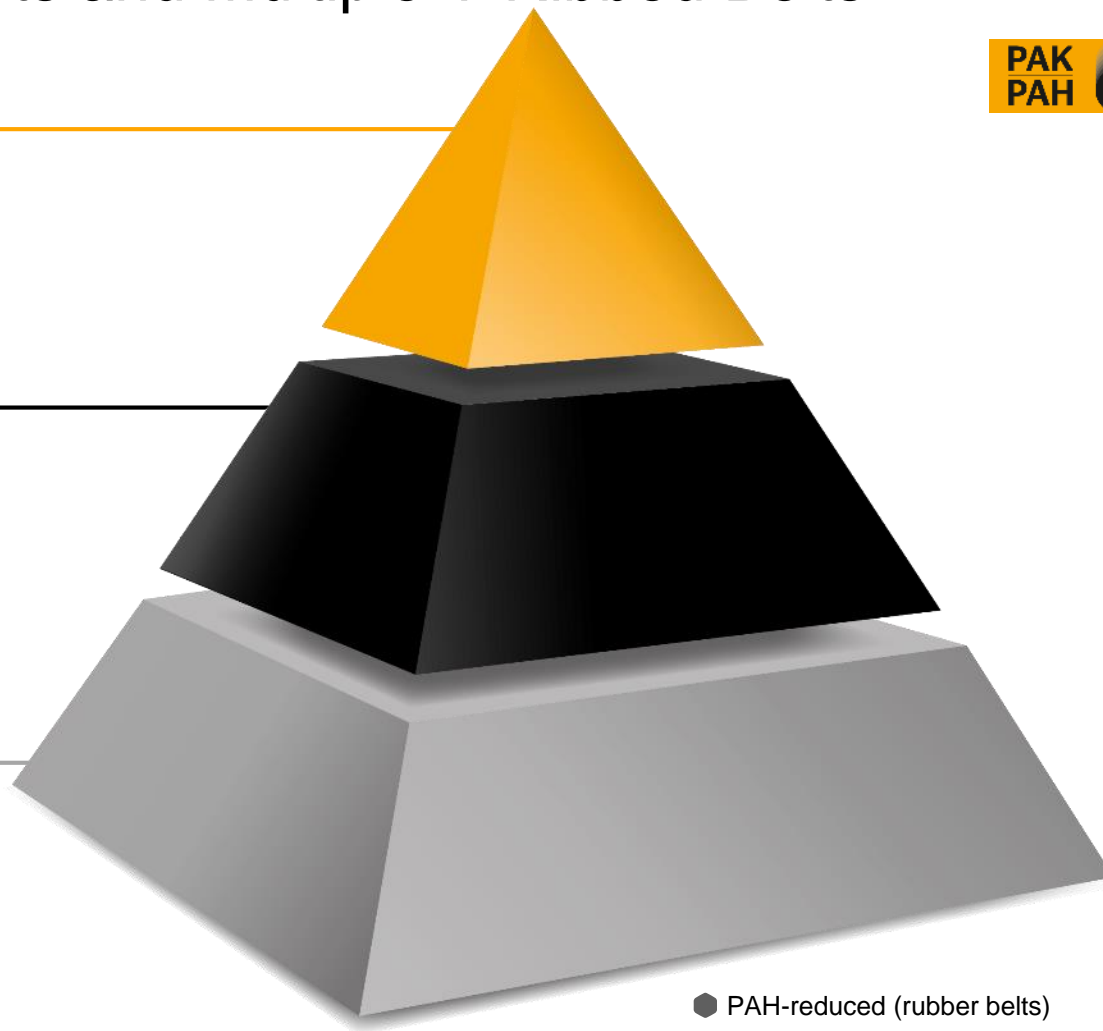
- > CONTI®V FO PIONEER ●
- > CONTI®V POWER
- > CONTI®V MULTIBELT POWER
- > CONTI®V DUAL POWER
- > CONTI®V VARISPEED POWER

Advanced Performance

- > CONTI®V FO ADVANCE
- > CONTI®V ADVANCE
- > CONTI®V MULTIBELT ADVANCE
- > CONTI®V DUAL ADVANCE
- > CONTI®V GARDEN
- > CONTI®V VARISPEED ADVANCE
- > CONTI®V MULTIRIB POWER

Standard Performance

- > CONTI®V FO
- > CONTI®V MULTIBELT FO
- > CONTI®V
- > CONTI®V MULTIBELT
- > CONTI®V DUAL
- > CONTI®V MULTIRIB
- > CONTI®V MULTIRIB ELAST



Industrial Drive Belts from ContiTech

The Trendsetter with Lower PAHs

ContiTech

PAK
PAH

V-belts

CONTI®V FO PIONEER

- › PAHs are a natural constituent of coal and oil and therefore occur as standard in carbon blacks

Rubber timing belts

CONTI® SYNCHROFORCE CXA + CXP

CONTI® SYNCHROLINE CXP

CONTI® SYNCHROTRIB CXA + CXP

CONTI® SYNCHROTWIN CXA + CXP

CONTI® SYNCHROCOLOR + CXA + CXP

CONTI® SYNCHROCOLOR

- › Carbon blacks provide electrical conductivity and abrasion resistance in rubber belts



Electrical
conductivity



Abrasion
resistance

- › PAH levels can be reduced by using special carbon blacks
- › PU belts contain no carbon black and are therefore PAH-free by default

Polyurethane belts

CONTI® SYNCHROFLEX + GENIII

CONTI® SYNCHROCHAIN + CARBON

CONTI® SYNCHRODRIVE



CONTI®POLYFLAT

The Trendsetter with Lower PAHs – Motivation to Reduce PAH Level



Polycyclic Aromatic Hydrocarbons

- › Can be harmful to health in the event of extended exposure to the product or product fines
- › GS and EU have clear specifications:

GS certification "2014 AfPS GS:01 PAK"*	Category 2	Category 3	
	Cat. 1 ruled out; skin contact >30 s or repeatedly for brief periods	Cat. 1 and 2 ruled out; skin contact for up to 30 s	
	Other products (ProdSG)	Toys (Directive 2009/48/EC)	Other products (ProdSG)
PAH limits, individual	<0.5 mg/kg ✓	<0.5 mg/kg ✓	<1.0 mg/kg ✓
PAH limits, total of 18 PAHs	<10 mg/kg ✓	<20 mg/kg ✓	<50 mg/kg ✓
<small>*Category 1 refers to contact with the mouth</small>			
CE certification "1272/2013/EU" 	Toys for babies and toddlers	Accessible plastic and rubber parts	
PAH limit, individual	<0.5 mg/kg ✓	<1.0 mg/kg ✓	

Industrial Drive Belts from ContiTech

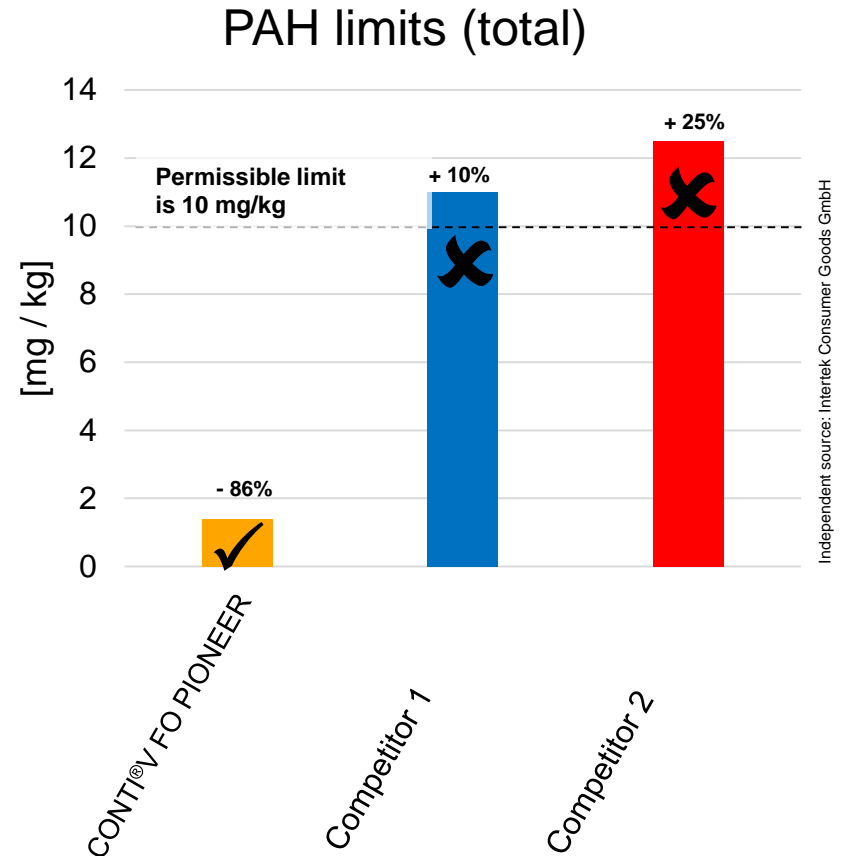
ContiTech

The Trendsetter with Lower PAHs – Motivation to Reduce PAH Level

Competitor comparison:



- › ContiTech as a trendsetter for PAH-reduced belts
- › Armed for future requirements
- › Only company in industry to meet limits
- › As standard for all sizes at no additional charge



It feels good to be prepared for everything!

