

Profile of rolling bearing damage (Bearing: KI21)

Category		Unit	Specification/Value
General info		Bearing Type	- deep groove ball bearing
		Bearing designation (dimension series, bore code)	- 6203
		Suffix	- -
Manufacturer specific information	Geometry	Diameter of inner raceway	mm 24.00
		Diameter of outer raceway	mm 33.10
		Pitch circle diameter	mm 28.55
		Number of rolling elements	pc. 8
		Rolling element diameter	mm 6.75
		Length of rolling element	mm 6.75
		Nominal pressure angle	° 0
Application specific information	Parameters	Static load rating	N 4750
		Dynamic load rating	N 9500
		Speed limit	min ⁻¹ 12000
		Manufacturer	- FAG
	Identification	Bearing code	- KI21
		Sample number	- 18-01
	Place of operation	Installation site	- 01
		Installation type (system type)	- bearing damage test bench (KAT)
		Operator	- Chair of design and Drive Technology, Paderborn
	Operating conditions	Number of load cycles	cycles 3610500
		Lifetime	h:min 20:01
		Load	N -
		Dynamic equivalent load	N 3220
		Rotational speed	min ⁻¹ 2900
		Load direction	° 0
		Comment	- n/a

		Number of damages	1		
Category			Damage 1	Damage 2	Damage 3
Damage	Type of Damage	Mode	fatigue		
		Sub-mode	n/a		
		Symptom	Pitting		
	Damage location	Component	IR		
		Position of damage	raceway		
		Damage combination	S		
		Arrangement of the respective damages	without repetitive damage		
	Geometry	Length mm	1		
		Extent of damage	1		
		Width mm	2		
		Depth mm	n/a		
		Characteristic of damage	single point		
	Damage occurrence	Damage method	lifetime test		
		Cause of damage (category)	operating conditions and lubricant		
		Cause of damage (detailed)	overload, wrong viscosity, contamination		

Legend

OR: outer ring

IR: inner ring

S: single damage

R: repetitive damage

M: multiple damage