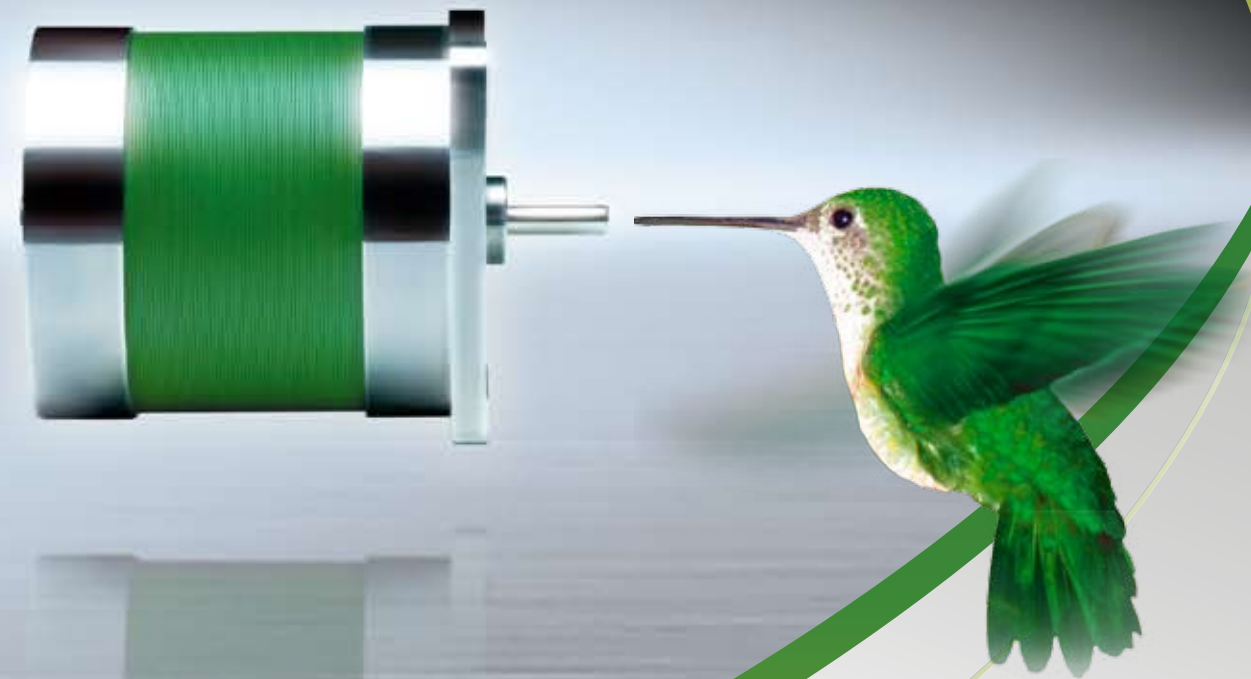


**ROS SYNC**<sup>TM</sup>

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**ROTEK**



## Kissed by nature!

**ROSYNC –**  
The first energy-saving small motor  
for industrial applications

- Utilising our 'GreenDrive technology' (patent pending), the Rosync motors feature environmental advantages including:
- > Highly efficient power usage, enabling a low current draw for a powerful motor.
  - > Extremely compact design encompassing maximum material efficiency.



Innovative patented stator geometry (patent pending)  
High-power magnet



# Efficiency up to 95% >> Up to 3 times more performance

## Extremely compact and energy-saving

The ROSYNC motors have been developed for maximum performance with low energy consumption. The secret of the high efficiency is in the new GreenDrive technology. Innovative stator geometry and the use of the most up-to-date magnetic materials ensure excellent efficiency:

- > as a single-phase AC motor up to 75%
- > as a three-phase AC motor up to more than 90%

With the result that ROSYNC motors meet today's demands for efficient use of energy. In comparison with conventional single-phase synchronous motors they offer up to 40% more output power. As a three-phase motor they even offer up to 3 times more performance for the same size. This translates as maximum performance and efficiency for an astonishingly good price.



comparison of ROSYNC and conventional 3-phase motor

### Advantages

- > maximum performance for low energy consumption
- > compact design
- > long service life

### Characteristics

- > constant speed (load-independent)
- > inverter drive from 30–2,100 rpm
- > smooth-running operation
- > short start/stop times
- > maintenance-free



LIMIT DATAS	
Winding:	Continuous operations S1 to EN 60034 (VDE 0530), optionally S3
Insulating class:	F (155° absolute) to EN 60034 (VDE 0530)
Protection class:	IP40, optionally IP55 to EN 60034
Bearings:	High-quality ball bearings
Connection type:	Flying leads or terminal box
Insulation test:	2500 V eff.
EMC tested:	Motors fulfil requirements of EN 50081-1 and EN 50081-2
RoHS and WEEE:	Motors have fulfilled requirements of 2002 / 95 /EG since 01.07.2005.
Ambient temperatures:	-25 °C bis 50 °C
Max. radial load:	40 N
Max. axial load:	20 N
Nominal voltage:	+/- 10 %
Nominal frequency:	+/- 5 %
Capacitor:	+/- 5 %

### Options

- > windings for special voltages or for more power (short-time operation)
- > IP55 protection class
- > modification of housing and shafts
- > Thermal-protection switch

### Notes for ordering

Motor type (e.g. KM65/42-4)  
 Voltage (e.g. 230 V)  
 Frequency (e.g. 50 Hz)  
 Capacitor (e.g. 1.3 µF)  
 Model (leads or terminal box)



## ROSYNC KM65/42-4 >> Technical specifications

Voltage	Frequency	Speed	Capacitor	Rated current	Input power	Torque	Output power	Winding over temp.
3~400	50	1500	-	100	70	32	50	< 105
	60	1800	-	85	60	25	47	< 105
3~230°	50	1500	-	175	70	32	50	< 105
	60	1800	-	150	60	25	47	< 105
1~230	50	1500	1,3	130	30	13	20	< 105
	60	1800	1,3	135	31	12	22	< 105
1~115	50	1500	5,2	260	30	13	20	< 105
	60	1800	5,2	270	31	12	22	< 105
1~24	50	1500	120	1250	30	13	20	< 105
	60	1800	120	1300	31	12	22	< 105

## ROSYNC KM65/85-4 >> Technical specifications (provisional data)

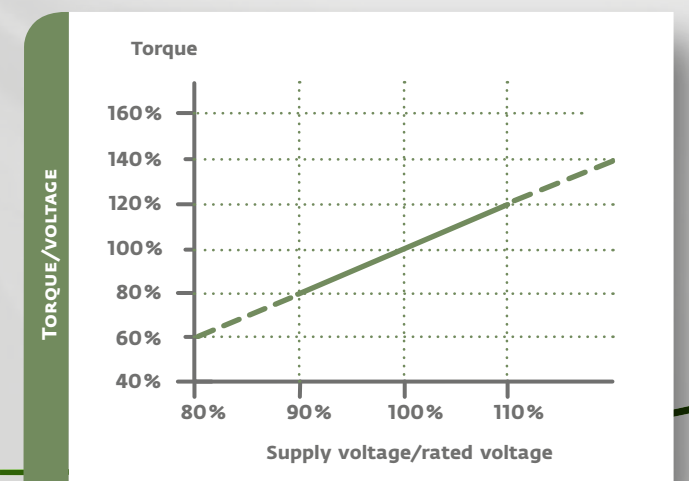
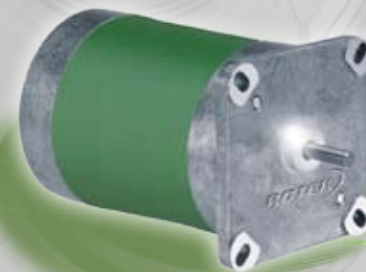
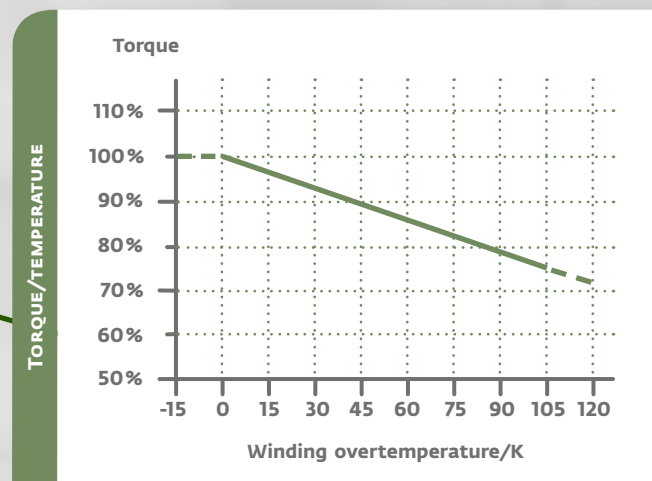
Voltage	Frequency	Speed	Capacitor	Rated current	Input power	Torque	Output power	Winding over temp.
3~400	50	1500	-	200	140	54	85	< 105
	60	1800	-	175	120	38	72	< 105
3~230°	50	1500	-	350	140	54	85	< 105
	60	1800	-	300	120	38	72	< 105
1~230	50	1500	2,0	220	51	23	36	< 105
	60	1800	2,0	240	55	21	40	< 105
1~115	50	1500	8,0	440	51	23	36	< 105
	60	1800	8,0	480	55	21	40	< 105
1~24	50	1500	180	2100	51	23	36	< 105
	60	1800	180	2300	55	21	40	< 105

Performance details: measured values at room temperature, rated voltage and rated capacity minus a safety margin

\*The safe operating frequency via an inverter is between 1 and 70 Hz. The characteristic curve of the frequency inverter has to be chosen so that at lower frequencies the voltage is decreased sufficiently to keep the motor winding within its operating temperature range.

Performance details: measured values at room temperature, rated voltage and rated capacity minus a safety margin

\*The safe operating frequency via an inverter is between 1 and 70 Hz. The characteristic curve of the frequency inverter has to be chosen so that at lower frequencies the voltage is decreased sufficiently to keep the motor winding within its operating temperature range.

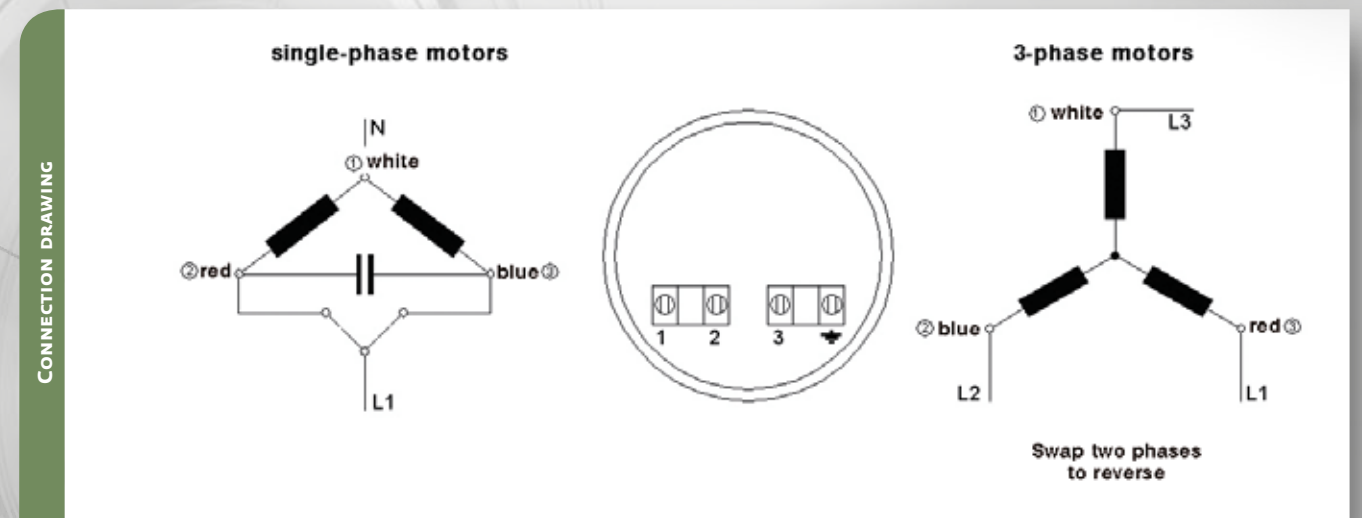
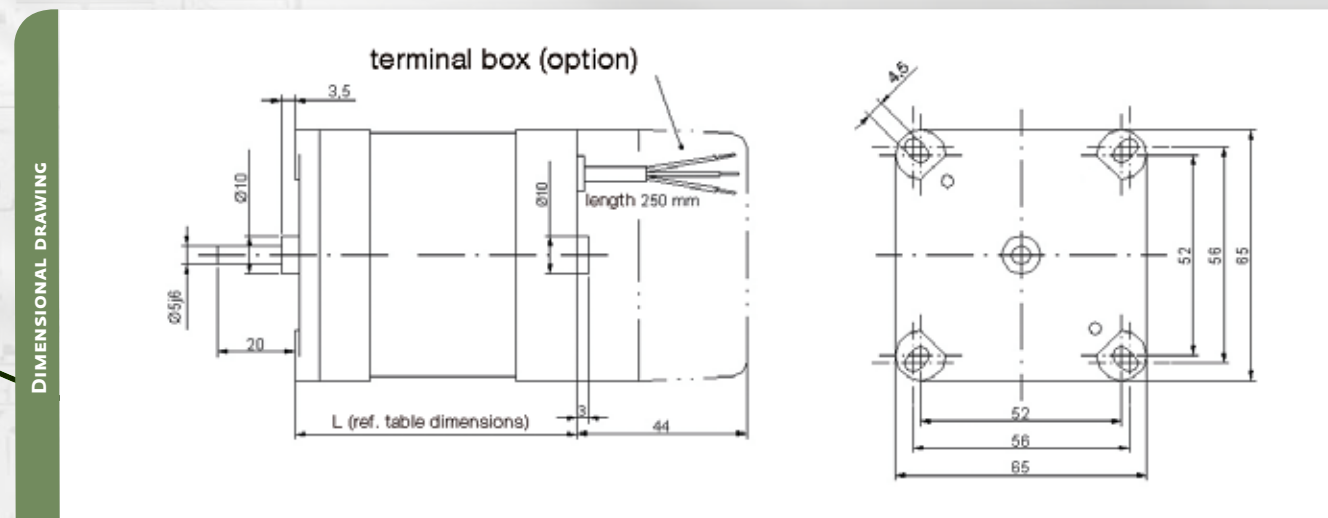


# ROSYNC KM65 >>

## Technical specifications



DIMENSIONS	Lead wire type		terminal box type		
	MOTOR TYPE	LENGTH IN MM	WEIGHT IN KG	LENGTH IN MM	WEIGHT IN KG
	KM65/42-4	74	0,85	118	0,95
	KM65/85-4	117	1,5	161	1,6



# ROTEK planetary gears >> perfect performance

## High efficiency – compact design

Our planetary gears are characterized by their optimum performance to size ratio and durability. The simultaneous direct intervention of three planetary gears per stage supports the handling of extreme forces within a small footprint.

Robust, maintenance free and versatile, these gears are predestined for really demanding applications.

The excellent performance to size ratio gives customers an extremely compact and efficient drive unit in combination with our synchronous motors.

### Advantages

- > high torque within a small footprint
- > high shock resistance
- > excellent size to power ratio

### Characteristics

- > concentric output shaft
- > low backlash
- > maintenance free

### Options

- > Low-noise version
- > Customized shafts and flanges
- > IP53 protected
- > special lubrication

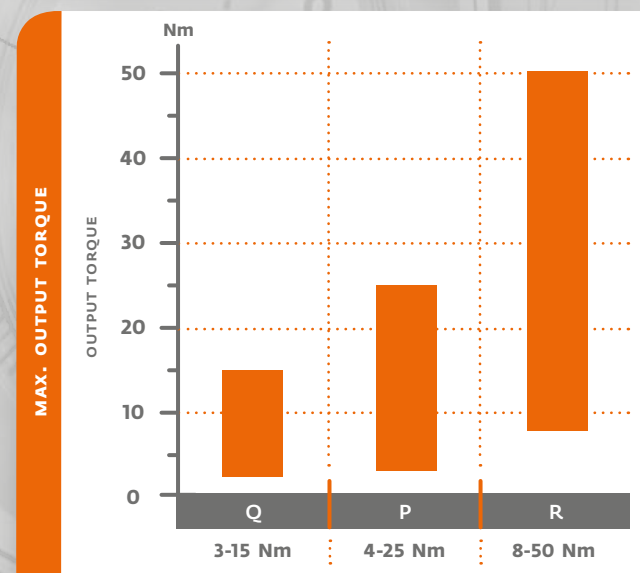


## Functional Description planetary gears

FUNCTIONAL DESCRIPTION	Flange:	Aluminium
	Gear wheels:	Hardened heavy-duty steel
	Protection class:	IP40 (optionally IP53)
	Shaft bearings:	2 consecutive ball races
	Lubrication:	Life-time lubrication
	Assembly position:	any
	Direction of rotation:	Same for input and output shaft
Ambient temp.:	-15 to +60°C	
Gear play:	max. 0.9° (series R: 2.0°)	

## Notes for ordering

- Geared motor type (e.g. KPM65/42-4 = motor KM65/42-4 with gearbox P)
- Voltage (e.g. 230 V)
- Frequency (e.g. 50 Hz)
- Capacitor (e.g. 1.3 µF)
- Model (leads or terminal box)
- Output Speed (e.g. 10 rpm)
- or ratio (e.g. i=149.9:1)

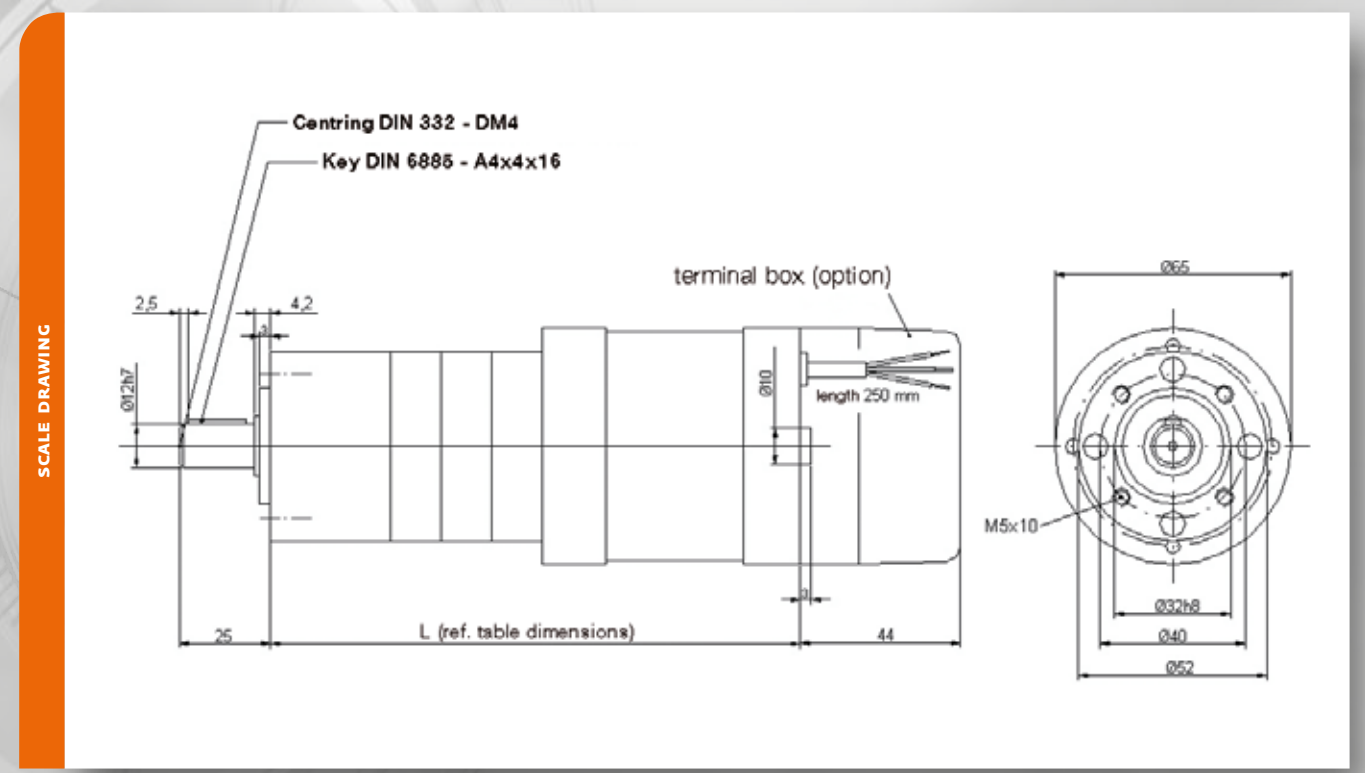


# KPM65 planetary gearbox motors >>

## Technical specifications

PLANETARY GEARBOX P/ MOTORS KPM65	Stages/ efficiency	Max. torque cont./peak Nm	Max. load radial/axial N	Ratio i	Speed (50 Hz) rpm	ROSYNC KPM65/42-4		ROSYNC KPM65/85-4	
						Torque (50 Hz)		Torque (50 Hz)	
						1~	3~	1~	3~
1/80%	4/6	200/60	4,3	348,8	0,45	1,1	0,79	1,86	
					6,8	220,6	0,71	1,74	1,25
2/75%	12/18	320/100	13,7	109,5	1,34	3,29	2,36	5,55	
			22,2	67,6	2,16	5,33	3,83	8,99	
3/70%	25/37	450/150	28,9	51,9	2,82	6,94	4,99	11,7	
			50,9	29,5	4,63	11,4	8,19	19,24	
			58,9	25,5	5,36	13,19	9,48	22,26	
			68,1	22	6,2	15,25	10,96	25,74	
			95,2	15,8	8,66	21,32	15,33	35,99	
			124	12,1	11,28	27,78	19,96	46,87	
			149,9	10	13,64	33,58	24,13	56,66	
			195,3	7,7	17,77	43,75	31,44	73,82	
			236,1	6,4	21,49	52,89	38,01	89,25	
			307,5	4,9	27,98	68,88	49,51	116,24	

DIMENSIONS	GEARED MOTOR	Length in mm (Terminal box type +44 mm)			Weight in kg (Terminal box type + 0.1 kg)		
		1-STAGE	2-STAGE	3-STAGE	1-STAGE	2-STAGE	3-STAGE
	KPM65/42-4	121	135	149	1,35	1,55	1,75
	KPM65/85-4	164	178	192	2,00	2,20	2,40



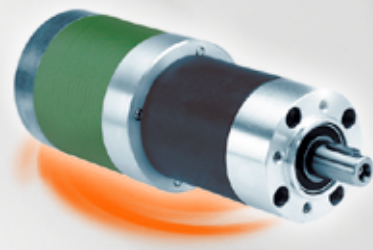
# ROSYNC >> Overview of geared motors

Rosync motors are perfect for connecting to the other gearboxes from our modular system. You can find more detailed information in the main catalogue and on our web page at [www.rottek-motoren.de](http://www.rottek-motoren.de).



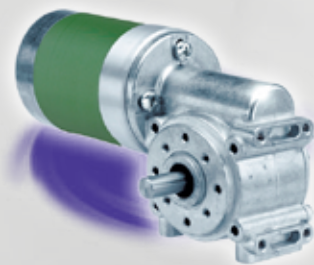
## Spur gear motors

KGM65:  $i=5:1-1000:1$ , 6-10 Nm  
KVM65 bzw. KWM65:  
 $i=10:1-1000:1$ , 8-13 Nm



## Planetary gear motors

KQM65:  $i=4:1-307:1$ , 3-15 Nm  
KPM65:  $i=4:1-307:1$ , 4-25 Nm  
KRM65:  $i=4:1-307:1$ , 8-50 Nm



## Worm gear motors

KSM65:  $i=5:1-100:1$ , 3-10 Nm

## Our philosophy is simple >> one motor technology – endless possibilities

### A family business with a future >>

ROTEK has more than 20 years experience as a manufacturer of innovative and highly efficient small motors. Exceptional flexibility and high-quality drive technology are our benchmark. Today ROTEK is successfully represented by a sales network in more than twenty countries.

### Individual solutions are our standard >>

We understand excellent flexibility to mean optimum adaptability of the drives, short delivery times and unbureaucratic processing. With more than 60,000 standard variants, our flexible modular assembly system offers a maximum level of adaptability.

### Top quality right down to the last detail >>

The drive is the heart of every machine. For this reason we check the quality features of every motor individually. We back our own developments, a high vertical range of manufacture and reliable suppliers of many years' standing. This means that we can guarantee sophisticated designs, the use of high-grade materials and the most meticulous workmanship.

### The environmental commitment >>

We feel committed to the conservation of our environment and the frugal use of energy and natural resources. Therefore it is our goal to offer the most environmentally friendly drives possible and to avoid production-based environmental pollution as far as possible.

