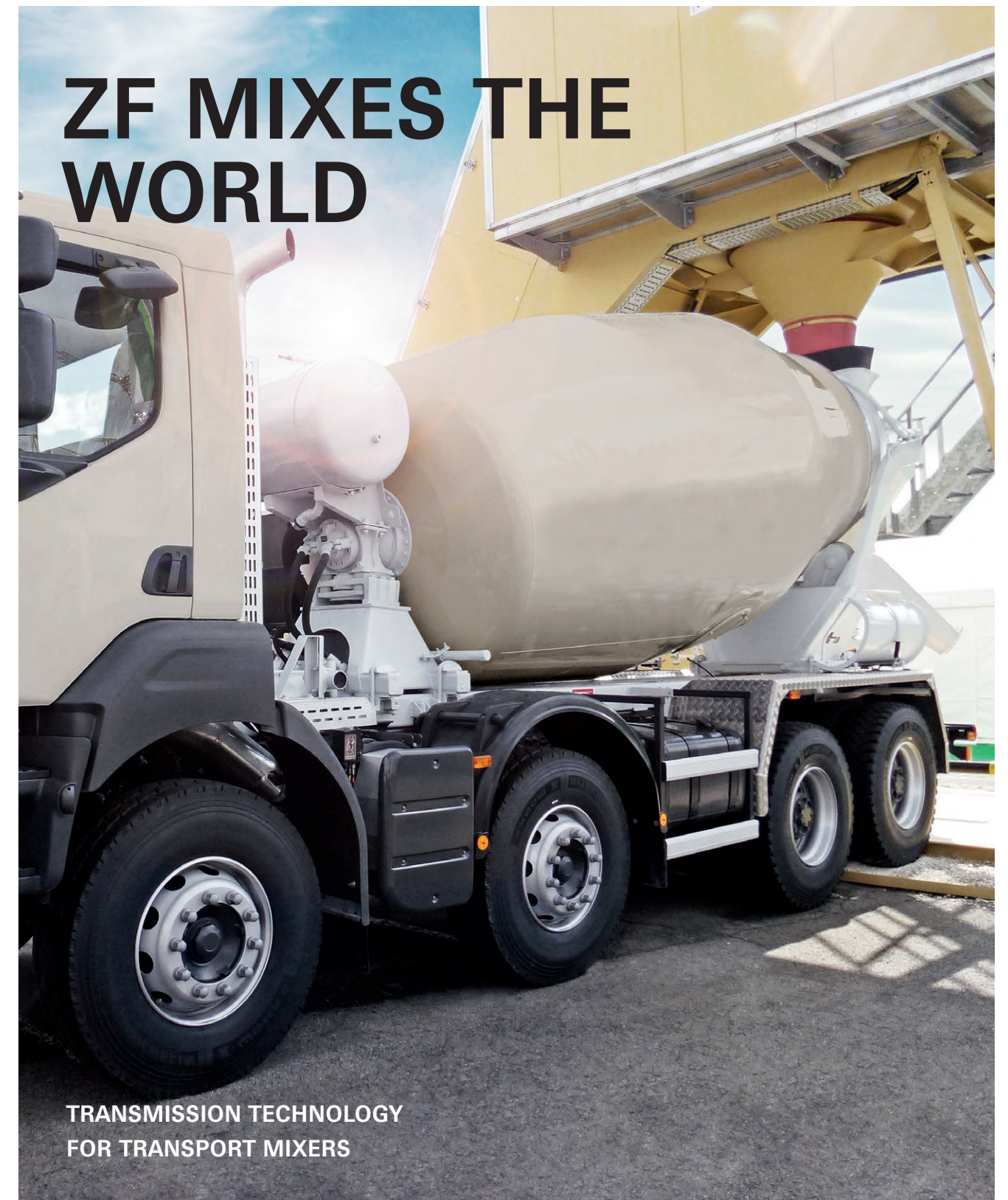


ZF Friedrichshafen AG
Division Industrial Technology
Construction Machinery Systems
94030 Passau
Germany
Phone +49 851 494-2732
Fax +49 851 494-2191
sales.iac@zf.com
www.zf.com



MOTION AND MOBILITY

IAC / MIXER 14 / EN The right is reserved to modify products and technical data.



ZF ECOMIX II – THE ULTIMATE SOLUTION FOR TRANSPORT MIXERS



A minimal empty weight for truck mixers is crucial for business. Every reduction in weight means a higher payload and lower costs for fuel, tires, fees and taxes. ZF is focusing on that with smaller, lighter and more efficient transmissions.

Worldwide solutions

In driveline technology for concrete mixers ZF is extending its lead in the world's market. Vehicle manufacturers from the USA to China put their trust in the high quality of ZF mixer transmissions. ZF fulfills this demand through continual product innovation.

Unique design

ZF has developed the ECOMIX II range type CML (Concrete Mixer Lowspeed) for transport mixers up to 16 m³ drum capacity. ECOMIX II is based on the achievements of the first Ecomix generation, however, they are smaller, lighter, tougher, more flexible, quieter, noise reduced and easier to service.

Smaller and lighter

Compared to previous models, the Ecomix II transmissions of the CML series are up to 24 % lighter and up to 50 % shorter. Due to the special design they also offer a wide range of further advantages.

Longer lifetime and more flexibility

Thanks to a tough bearing concept it was possible to significantly increase the output bearing strength, which leads to less sensitivity during off-road operation. The use of patented Elastomer units allow an increase of the axial runout at drum bottom and an increase of misalignment of the drum. With the new bearing concept the installation angle is no longer dependent on drum size and

drum filling. An installation angle up to 20° is always possible. The acoustic and mechanic decoupling of drum and vehicle frame leads to considerable noise reduction during operation and improved driving comfort.

Easy maintenance and lifetime oil

The service-friendliness has been improved by an adapted, weight-optimized slow running radial-piston motor and a separate oil volume for the transmission, as well as better accessibility. Instead of the previous sealing collar, a cassette seal is used, making the transmission more robust and increasing the service life. The transmission is fitted with lifetime oil lubrication. This saves costs and preserves the environment. The compact lightweight construction also offers the vehicle manufacturer more design freedom.

Fuel savings

The increased efficiency leads to fuel savings up to 0.5 liter per operating hour.

Off-road specialists

Driveline technology for construction machinery, construction site vehicles and material handling vehicles is developed and produced by the business unit off-highway systems, a part of the ZF division Industrial Technology. In this division, ZF bundles its activities for "Off-Road" applications. Among others it comprises the development and production of transmissions and axles for agricultural- and construction machinery as well as driveline technology for material handling systems.

ZF Group

ZF is a global leader in driveline and chassis technology that responds to global megatrends and is committed to the improvement of efficiency for all business areas.

SIZE Compared to the previous model, the ECOMIX II transmission is up to 50 % shorter which allows more flexibility at installation.

-50%

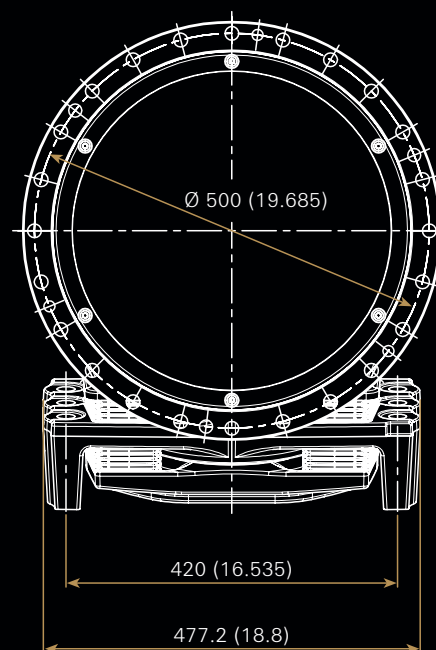
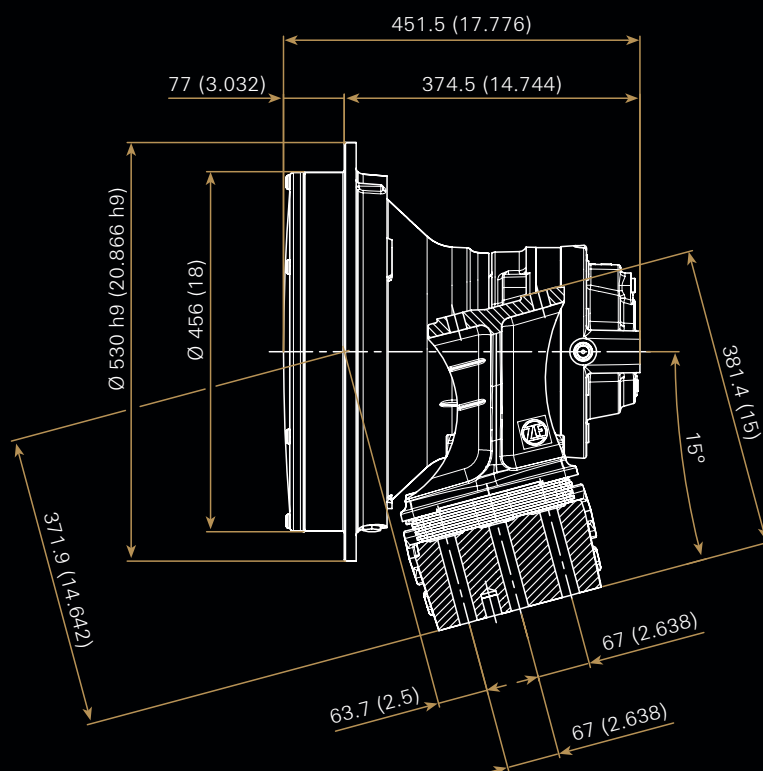
WEIGHT The revolutionary design of the ECOMIX II transmission made it possible to reduce weight by up to 24 %, thus allowing more payload.

-24%

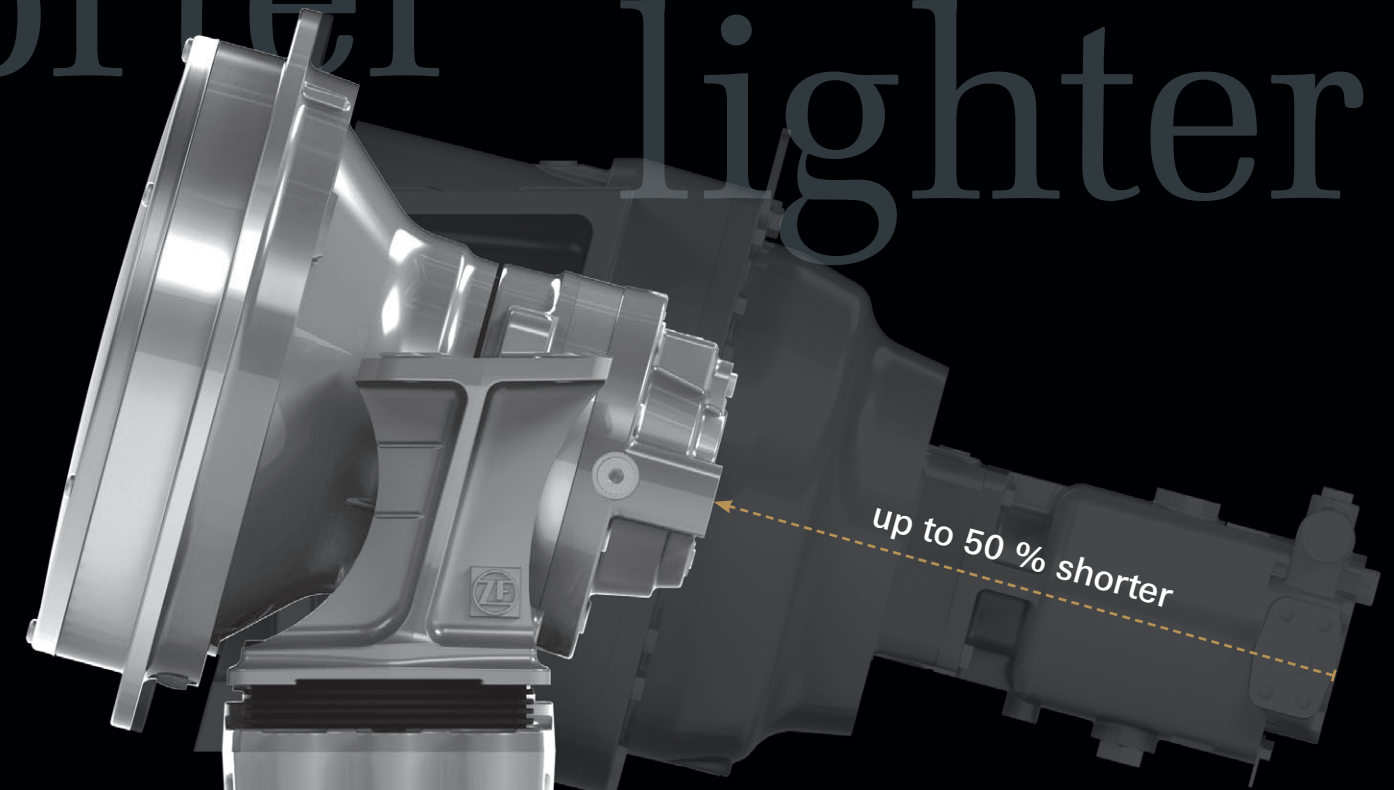
ECOMIX II – compact power for the world of concrete

The new ECOMIX II transmission is about 50 percent smaller and 24 percent lighter in comparison to previous models. This allows vehicle manufacturers more flexibility in design and makes assembly easier.

ECOMIX II CML 10/12



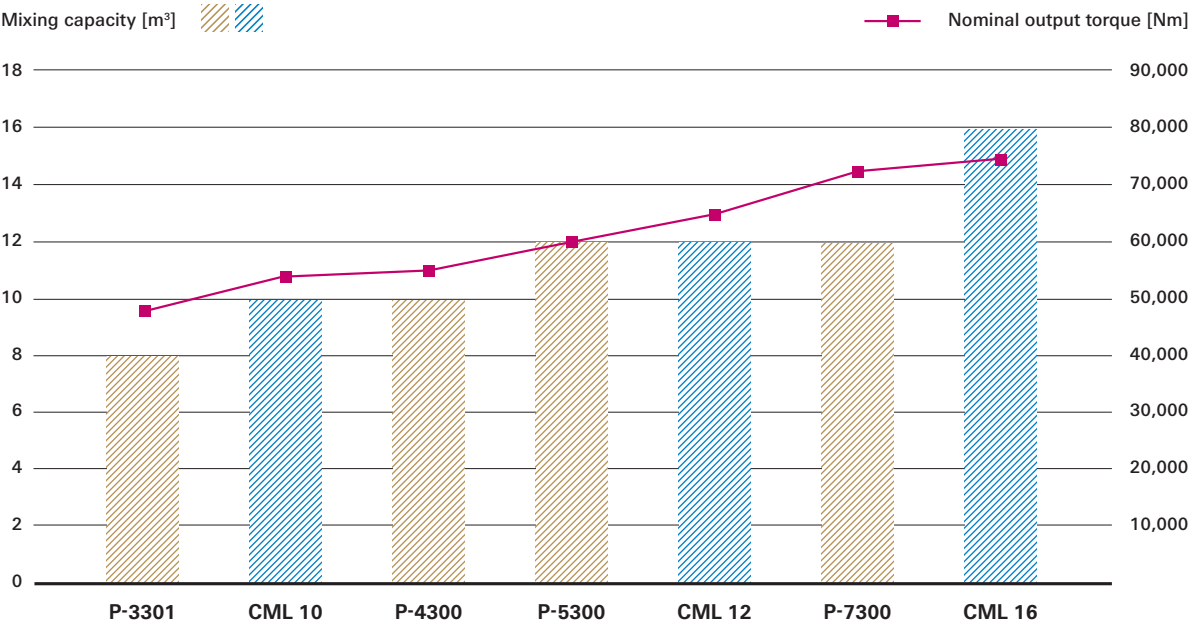
Measures in mm (inches)



Main product advantages of ZF-ECOMIX II

- Up to 24 % lighter: higher payloads
- Up to 50 % shorter: more installation flexibility
- Up to 10 dB noise reduction: environmental friendly
- Up to 20° drum installation angle: enables new drum design flexibility
- Increased efficiency: up to 0.5 liter (0.13 gallon) fuel saving per operating hour
- Tougher: improved robustness, increased lifetime, and doubled main bearing lifetime
- Life time oil filling: easier maintenance and cost savings
- Vibration isolation: absorption via elastomer unit results in improved driving comfort

PORTFOLIO. For various requirements and numerous classes of transport mixers, ZF offers a finely graded range of transmissions.



TECHNICAL DATA ZF-ECOMIX SERIES

		P-3301	CML 10	P-4300	P-5300	CML 12	P-7300	CML 16
Drum capacity (mixing capacity)	m³	7-8	8-10	8-10	10-12	10-12	12	12-16
	yd³	9.2-10.5	10.5-13.0	10.5-13.0	13.1-15.7	13.1-15.7	15.7	15.7-21.0
Nominal output torque	Nm	48,000	53,000	54,000	60,000	64,000	72,000	74,000
	lbf ft	35,400	39,100	39,800	44,200	47,200	53,100	54,600
Max. output torque	Nm	54,000	64,000	60,000	72,000	80,000	80,000	90,000
	lbf ft	39,800	47,200	44,200	53,100	59,000	59,000	66,400
Gear ratio	i =	141.0	7.8	135.3	135.3	7.8	144.3	6.3
Max. installation angle of drum	degree	15°	20°	15°	13.5°	20°	13.5°	20°
Transmission weight without oil	kg	242	280	335	340	285	350	313
	lbs	534	617	739	750	628	772	690
Displacement of integr. hydro motor	cm³/U	–	1.120	–	–	1.340	–	1.900
	in³/rev	–	68.3	–	–	81.8	–	115.9
Oil volume	dm³	7.5	8.0	11.5	11.5	8.0	11.5	8.0
	qt.	7.9	8.4	12.1	12.1	8.4	12.1	8.4



Learn more about our portfolio of powerful transmissions and find more ZF products by applications.

INNOVATIONS OF GREAT VALUE. As a worldwide system supplier, ZF is one of the technology and innovation leaders in the field of transport mixers.



PRODUCTS. ZF offers robust and high efficient transmissions for a wide range of transport mixers.

PRODUCT FEATURES ECOMIX I

- Up to 12 m³ mixing capacity
- Two planetary stages
- To be driven by high-speed hydro motor
- Without oil filling



ZF ECOMIX I
P-3301



ZF ECOMIX I
P-4300, P-5300, P-7300

PRODUCT FEATURES ECOMIX II

- Up to 16 m³ mixing capacity
- With elastomer bearing
- With low-speed radial piston motor
- With life time oil filling



ZF ECOMIX II CML 10, CML 12



ZF ECOMIX II CML 16