



PASSENGER VEHICLE  
TRANSMISSION DIVISION

乘用车变速器事业部

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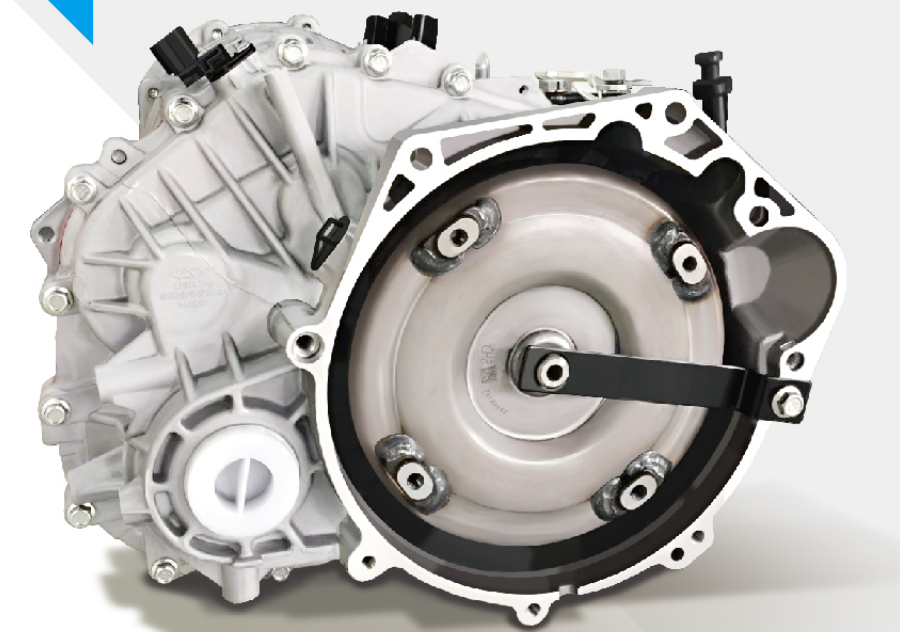
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WLY · PASSENGER  
VEHICLE  
TRANSMISSION

万里扬 · 乘用车变速器





成就客户造车梦想

Fulfill Customers' Dream To Build Vehicles

贡献中国品牌力量

Make Contribution To China's Brands



## BRIEF INTRODUCTION OF PASSENGER VEHICLE TRANSMISSION DIVISION

### 乘用车变速器事业部简介

乘用车变速器事业部是在收购原吉利手动变速器和原奇瑞变速器的基础上组建而成，拥有浙江宁波和安徽芜湖两大基地，是浙江万里扬股份有限公司重点发展的业务单元。现有员工 2000 余人，产品覆盖 CVT、AT、MT 等十几款乘用车变速器，主要为吉利、奇瑞、比亚迪、众泰、东风小康、北汽集团、海马、汉腾、力帆、野马等主流汽车厂提供配套服务，已形成年产 100 万台手动变速器和 80 万台自动变速器的综合能力；是国内首批具备研发和生产乘用车全系车型（轿车、SUV、MPV 等）CVT、AT、MT 变速器的企业之一。

事业部 MT 产品市场保有量 1000 万台，CVT 产品市场保有量 60 万台，其中累计出口海外 150 万台。已成为当前国内乘用车变速器自主品牌中发展最快、品种最多、规模最大的企业之一。

The passenger vehicle transmission division is an increasingly important unit of WLY. It is formed after the acquisition of the former Geely MT transmission and Chery transmission businesses. It has two production bases in Ningbo Zhejiang and Wuhu Anhui respectively. The division currently has more than 2000 employees. Its main products include more than 10 models of passenger vehicle transmissions including 5MT, 6MT, CVT and AT, supplying to Geely, Chery, BYD, Zoyte, DFSK, BAIC, Haima, Hanteng, Lifan, Yema and other automobile companies. Its annual production capacity is 1 million units for MT and 500,000 units for CVT. It is the first company in China whose MT, CVT and AT transmissions applying to the whole range of passenger vehicles, including car, SUV and MPV.

The market volume for its MT products reaches more than 10 million units and 500,000 units for CVT products. The accumulated export volume is 1.5 million. It has become one of the biggest transmission companies in China that boast the fastest development, the most varieties and the largest scale in passenger vehicles.





事业部拥有工程技术人员 420 余人,其中硕博士及高级职称 36 人,安徽千人计划 5 人,安徽省领军人物 2 人;拥有国内外先进试制加工全套设备,具备变速箱壳体、阀体、轴齿、带轮系统等机加件的试制加工能力;拥有全套试验台架和数据采集设备,可以进行变速箱总成性能 / 耐久试验、动力总成道路模拟试验、关键零部件性能及可靠性试验验证等;并与合肥工业大学和重庆理工大学等多所高等院校开展合作,已形成预研一代,开发一代,生产一代的产品体系。产品的关键技术指标达到国际先进、国内领先水平。所有产品完全拥有独立的知识产权,拥有授权专利 78 项,其中发明专利 51 项。

事业部自主设计、验证和批产的 CVT19 无级变速器填补了国内自动变速器的空白,并在 2013 年荣获“中国汽车工业科学技术奖一等奖”,2017 年荣获“中国十佳变速器”荣誉称号。

事业部通过 IATF16949 质量管理体系认证。坚持“品质优先,顾客至上,持续改进,打造世界级变速器供应商”的质量方针,以国际领先水平为导向,努力把事业部打造成具有优秀企业文化、高度社会责任感、科学发展理念、持续创新能力和国际一流竞争力的汽车零部件供应商。

It has more than 420 technical engineers, of which 36 have master or doctor degree or senior professional title, 5 people are selected in 1000 talents plan and 2 people are leading pioneers in Anhui. It has complete production equipment for transmission housing, valve, gear, shaft, hub and other parts and can carry out transmission overall performance test, durability test, drivetrain road simulation, performance test and reliability test of key parts. It establishes cooperation with universities including Hefei University of Technology and Chongqing University of Technology. All its products have independent intellectual property rights and key technologies are advanced both home and abroad. It now obtains 78 authorized patents and 51 patents of invention.

Its mass production transmission CVT19 which is designed by the company itself fills in the gap in China's automatic transmission. It won the first prize of "China Automobile Industry Awards for Science & Technology" in 2013 and "China's Top Ten Transmissions" in 2017.

The division has passed the IATF16949 quality management system verification. It follows the quality policy "quality first, customer oriented, continuous improvement, to be a world-class transmission supplier". It aims to build a world-class auto parts supplier with excellent corporate culture, high level social responsibility, scientific development concept, continuous innovation driving force and international competitiveness.



## MANUFACTURING BASE

### 制造基地

芜湖基地·Wuhu Base



宁波基地·Ningbo Base





## EQUIPMENT SHOW

### 装备展示



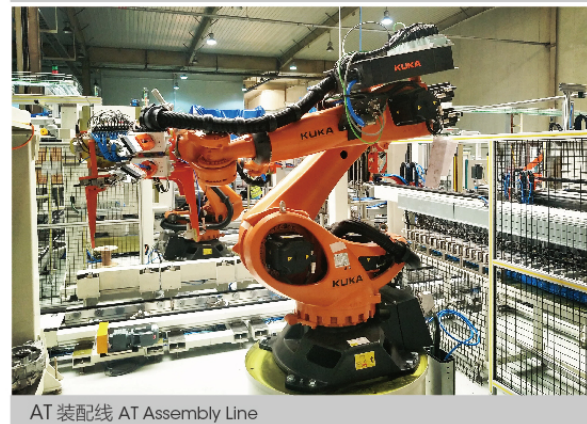
零部件生产线 Components Production Line



壳体加工线 Housing Machining Line



CVT 装配线 CVT Assembly Line



AT 装配线 AT Assembly Line

## CUSTOMER SHOW

### 主要客户展示



卡普磨齿机 KAPP NILES KX260 TWIN



MT 装配线 MT Assembly Line



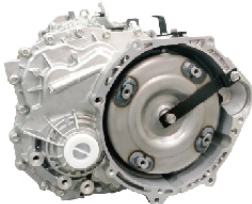


TRANSMISSION  
CATALOG

乘用车变速器型谱

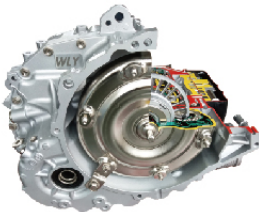
CVT

型号 Model	CVT19	CVT18/20	CVT25/28
额定输入扭矩 Rated Input Torque/N.m	190	180/200	250/280



AT

型号 Model	6AT28	8AT40
额定输入扭矩 Rated Input Torque/N.m	280	400



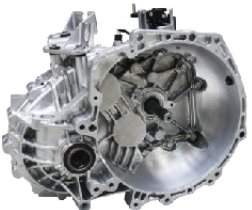
混合动力 Hybrid

型号 Model	CVT19PHEV	CVT38PHEV	6AT28PHEV
额定输入扭矩 Rated Input Torque/N.m	190	380	280

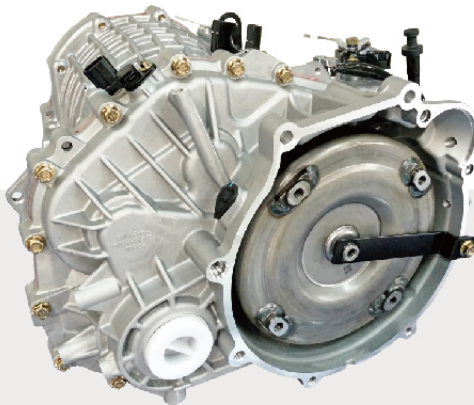


MT

型号 Model	5MF12	5MF17	5MF22
额定输入扭矩 Rated Input Torque/N.m	100	170	220
型号 Model	6MF22	6MF28	
额定输入扭矩 Rated Input Torque/N.m	220	280	



WLY CVT19



PASSENGER VEHICLE  
CONTINUOUSLY VARIABLE TRANSMISSION

乘用车无级变速器



主要特点 MAIN FEATURES

- 无级变速，从根本上规避换挡冲击问题，极具驾乘舒适性；  
Continuously variable transmission, fundamentally avoid shift shock problem,increased driving comfort;
- 变速范围广，与发动机工况的最佳匹配，提高整车燃油经济性；  
Variable speed range, achieve the best match with the engine operating conditions and improve vehicle fuel economy;
- 模拟手动 7 挡变速，可以让用户体验到双重驾驶乐趣。  
Simulated manual 7-speed transmission, allowing users to experience the dual driving pleasure.



产品先进性 PRODUCT FEATURES

- 整箱可靠性高：采用新一代高可靠性传动钢带，使变速箱寿命进一步提升；  
High reliability of the entire transmission: the use of a new generation of highly reliable belt to further enhance the transmission life;
- 燃油经济性好：具有更高的传动效率和更宽的速比范围，运用先进的智能控制系统，降低整车油耗，使其与 MT 车型相当；  
Fuel economy: higher transmission efficiency and a wider speed ratio range, the use of advanced intelligent control system, reducing vehicle fuel consumption, making it comparable with the MT models;
- 整车动力性好：采用液力变矩器起步，使整车具有比 MT 车型更优越的加速和爬坡性能。  
Good dynamic performance of vehicle: the use of torque converter makes the vehicle have more superior acceleration and climbing performance than MT models.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated Input Torque/N.m	速比 Gear Ratio			净重 Net Weight (Kg)	注油量 Oil capacity (L)
		带轮速比 (Pulley ratio)	倒挡速比 (Reverse ratio)	主减速比 (Final drive ratio)		

CVT19	190	2.47 ~ 0.43	2.75	4.78/5.14	78	8±0.2
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匹配发动机 MATCHING ENGINE

4.78/5.14/5.65.



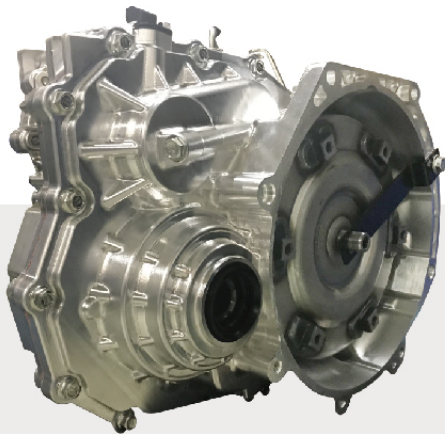
适用车型 APPLICABLE VEHICLES

奇瑞：瑞虎 3、瑞虎 5、瑞虎 7、艾瑞泽 5、艾瑞泽 7； 北汽银翔：比速 T3、幻速 S5； 力帆：轩朗、X70； 野马：T60、斯派卡。  
Chery Tiggo3, Tiggo5, Tiggo7, Arrizo5, Arrizo7; Baic Yinxiang: Bisu T3、Hyosow S5; Lifan: Xuanlang、X70; Yema: T60、Spica.



WLY CVT18/20

PASSENGER VEHICLE  
CONTINUOUSLY VARIABLE TRANSMISSION  
乘用车无级变速器



主要特点 MAIN FEATURES

- 无级变速，从根本上规避换挡冲击问题，极具驾乘舒适性；  
Continuously variable transmission, fundamentally avoid shift shock problem,increased driving comfort;
- 变速范围大，实现与发动机工况的最佳匹配，提高整车的燃油经济性；  
Variable speed range, achieve the best match with the engine operating conditions and improve vehicle fuel economy;
- 提供 SPORT、ECO、WINTER 等多种功能模式，满足不同客户群体的需求。  
Provide SPORT, ECO, WINTER and other functional modes to meet the needs of different customer groups.



产品先进性 PRODUCT FEATURES

- 采用高效率叶片泵，容积效率高、泄漏小，内置流量控制阀，更加节能；  
Use efficient vane pump, high volumetric efficiency, less leakage, built-in flow control valve, more energy efficient;
- 采用独立的液压回路控制，给各系统提供精确的工作压力，使效率进一步提升；  
Independent hydraulic circuit control, to provide accurate pressure on the system, to further enhance the efficiency;
- 采用低粘度油品，提高低温驾驶性能，降低搅油损耗；  
Low viscosity oil, Improve the performance of low temperature driving, reduce oil stirringloss;
- TC 采用高热容量锁止离合器，具备低速滑差闭锁功能，集成高性能减震器，兼顾低速动力性和经济性表现；  
TC with high heat capacity lock-up clutch, with low-speed slip lock function, integrated high-performance shock absorber, taking into account the low-speed dynamic and economic performance;
- 起停、电子换挡和 48v BSG 应用。  
Start stop, electronic shift and 48v BSG application.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated Input Torque/N.m	速比 Gear Ratio			净重 Net Weight (Kg)	注油量 Oil capacity (L)
		带轮速比 (Pulley ratio)	倒挡速比 (Reverse ratio)	主减速速比 (Final drive ratio)		

CVT18/20	180/200	6.43~6.48	0.72	4.70~6.07	70	7.0±0.2
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匹配发动机 MATCHING ENGINE

1.5L、1.0T、1.07D .



适用车型 APPLICABLE VEHICLES

吉利远景 X3、吉利帝豪。  
Geely Vision X3、Geely Emgrand.

WLY CVT25/28

PASSENGER VEHICLE  
CONTINUOUSLY VARIABLE TRANSMISSION  
乘用车无级变速器



主要特点 MAIN FEATURES

- 无级变速，从根本上规避换挡冲击问题，极具驾乘舒适性；  
Continuously variable transmission, fundamentally avoid shift shock problem,great ride comfort;
- 变速范围大，实现与发动机工况的最佳匹配，提高整车的燃油经济性；  
Variable speed range,achieve the best match with the engine operating conditions and improve vehicle fuel economy;
- 提供手动模式，模拟手动 9 挡变速，可以让用户体验到双重驾驶乐趣；  
Provide manual mode, simulate manual 9 speed gear shift, allowing users to experience the dual driving pleasure;
- 提供 SPORT、ECO、WINTER 等多种功能模式，满足不同客户群体的需求。  
Provide SPORT, ECO, WINTER and other functional modes to meet the needs of different customer groups.



产品先进性 PRODUCT FEATURES

- 采用高效率叶片泵，容积效率高、泄漏小，内置流量控制阀，更加节能；  
Use efficient vane pump, high volumetric efficiency, less leakage, built-in flow control valve, more energy efficient;
- 采用独立的液压回路控制，给各系统提供精确的工作压力，使效率进一步提升；  
Independent hydraulic circuit control, to provide accurate pressure on the system, to further enhance the efficiency;
- 采用最新型钢带，提升变速箱效率，有利于整车节能减排；  
Using the latest steel belt to enhance transmission efficiency, energy saving and emission reduction;
- TC 采用高热容量锁止离合器，具备低速滑差闭锁功能，集成高性能减震器，兼顾低速动力性和经济性表现；  
TC with high heat capacity lock-up clutch, with low-speed slip lock function, integrated high-performance shock absorber, taking into account the low-speed dynamic and economic performance;
- 起停、电子换挡和 48v BSG 应用。  
Start stop, electronic shift and 48v BSG application.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated Input Torque/N.m	速比 Gear Ratio			净重 Net Weight (Kg)	注油量 Oil capacity (L)
		带轮速比 (Pulley ratio)	倒挡速比 (Reverse ratio)	主减速速比 (Final drive ratio)		

CVT25/28	250	2.69 ~ 0.38	0.75	4.8~6.08	84.5	7.3±0.2
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匹配发动机 MATCHING ENGINE

1.2T、1.4T、1.5T、1.6T .



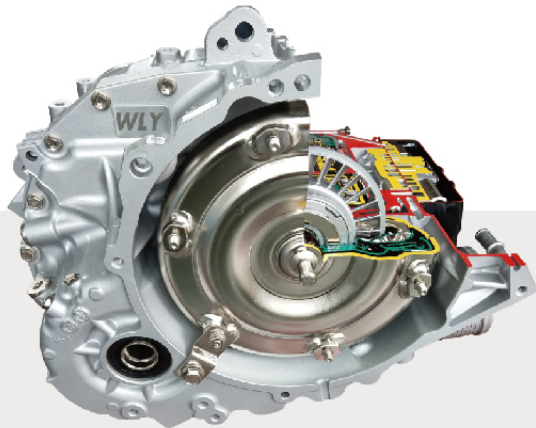
适用车型 APPLICABLE VEHICLES

奇瑞瑞虎 3、瑞虎 5、艾瑞泽 5、吉利远景 X6。  
Chery Tiggo3、Tiggo5、Aarizo5、Geely Vision X6.



WLY 6AT28

PASSENGER VEHICLE  
AUTOMATIC TRANSMISSION  
乘用车自动变速器



产品特点 PRODUCT FEATURES

- 重量轻，体积小，效率高，舒适性优，适用性强；  
Light weight, compact in size, high efficiency, comfort and wide application;
- 技术领先：基于 AUTOSAR 的软件架构让软件更加易于整车集成。液力变矩器采用扁平化和大转角减振器设计，扩大闭锁范围；采用滑差控制和直驱电磁阀控制油压，简化液压系统设计，提高效率，预留了启停电磁泵与阀体集成于一体化设计；  
Leading Technology: Based on AUTOSAR software architecture, easy for vehicle integration; torque converter flattening design, vast angle torsional damper, expand lock-up range; use slip-control strategy and direct-drive solenoids to control; simplify hydraulic system layout to improve efficiency; electromagnetic pump (start-stop) and valve body integrated;
- 电子换挡和 48V BSG 应用。  
Electronic shift and 48V BSG application.



技术参数 TECHNICAL PARAMETERS

型号 Model	允许发动机最大扭矩 Max. Engine torque	允许发动机最高转速 Max. Engine speed	尺寸（长*宽*高） Size (L*W*H)	中心距 Center distance	液力变矩器尺寸 Torque converter size	重量（含油） Weight (with ATF)
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6AT28	280NM	6500rpm	370.5*502*394mm	189mm	D225mm	82kg
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速比参数 SPEED RATIO

1ST	2ND	3RD	4TH	5TH	6TH	REV	主减速比 I Final ratio I	主减速比 II Final ratio II
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4.46	2.51	1.56	1.14	0.85	0.67	3.19	0.91	3.87
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- 速比可根据客户的车型和发动机来重新匹配调整。
- Gear ratio can be matched and adjusted according to customer' s vehicle and engine.



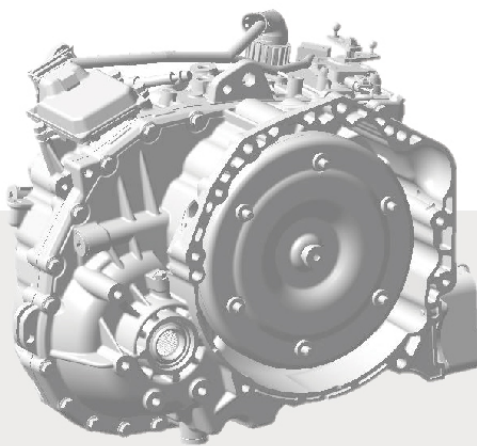
适用车型 APPLICABLE VEHICLES

可适用于中型乘用车，SUV，MPV 等；（Applicable to medium-sized passenger cars, SUV, MPV and so on;）  
可拓展为四驱；（Can be further extended to AWD and 4WD;）  
可匹配的发动机：1.6L, 1.8L, 2.0L, 1.0TD, 1.4T, 1.5T, 1.6T, 1.8T 等；  
Applicable engine: 1.6L, 1.8L, 2.0L, 1.0TD, 1.4T, 1.5T, 1.6T, 1.8T etc;  
基于“G”公司的“S”车型和“F”车型的骡子车开发中。  
In the development of mule car based on “G” company's “S” and “F” model.

WLY 8AT40

（在研）Under Development

PASSENGER VEHICLE  
AUTOMATIC TRANSMISSION  
乘用车自动变速器



产品特点 PRODUCT FEATURES

- 宽速比范围，效率高，驾驶性更优，实现好的燃油经济性，舒适性优，适用性强；  
Wide gear ratio, High efficiency, Drive performance, Good fuel economy, comfort and wide application;
- 技术领先：基于 AUTOSAR 的软件架构让软件更加易于整车集成。液力变矩器采用扁平化和大转角减振器设计，扩大闭锁范围；采用滑差控制和直驱电磁阀控制油压，简化液压系统设计，提高效率，预留了启停电磁泵与阀体集成于一体化设计；横置前驱 8 速自动变速器更有利于提升燃油经济性和驾驶性；  
Leading Technology: Based on AUTOSAR software architecture, easy for vehicle integration; torque converter flattening design, vast angle torsional damper, expand lock up range; use slip control strategy and direct-drive solenoids to control; simplify hydraulic system layout to improve efficiency; electromagnetic pump (start-stop) and valve body integrated;FF8AT improves fuel economy and drive performance;
- 电子换挡和高级启停。  
Electronic shift, advanced start-stop.



技术参数 TECHNICAL PARAMETERS

型号 Model	允许发动机最大扭矩 Max. Engine torque	允许发动机最高转速 Max. Engine speed	尺寸（长*宽*高） Size (L*W*H)	中心距 Center distance	液力变矩器尺寸 Torque converter size	重量（含油） Weight (with ATF)
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8AT40	400 Nm	6500rpm	390*560*420mm	197mm	D246mm	96kg
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速比参数 SPEED RATIO

1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	REV	主减速比 Final ratio
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5.25	3.03	1.95	1.46	1.22	1.00	0.81	0.67	-4.02	3.33
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适用车型 APPLICABLE VEHICLES

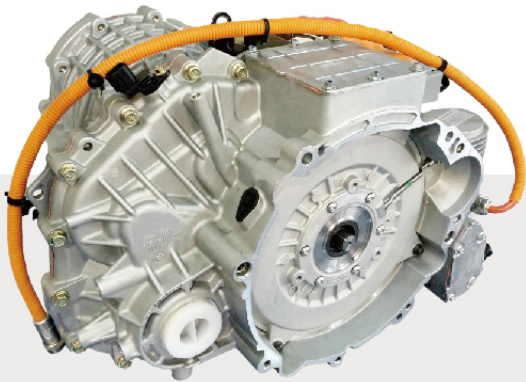
可用于中大型乘用车，SUV MPV；（applicable to Medium and large size passenger vehicle, SUV, MPV etc;）  
可拓展为四驱；（Can be further extended to AWD and 4WD;）  
可匹配的发动机：1.8TD、2.0TD、3.0V6 等；  
Applicable engine: 1.8TD、2.0TD、3.0V6 etc;



WLY CVT19 PHEV

HYBIRD CONTINUOUSLY  
VARIABLE TRANSMISSION

混合动力无级变速器



主要特点 MAIN  
FEATURES

- 采用国际主流的 P2 混动技术；一体化耦合无级变速，驾乘舒适性高；  
Using the international mainstream P2 mixing technology. Integrated coupling CVT, great ride comfort;
- 变速范围广，实现与发动机工况的最佳匹配，提高整车燃油经济性；  
Variable speed range, achieve the best match with the engine operating conditions and improve vehicle fuel economy;
- 可实现整车纯电形式、电机辅助驱动、再生制动能量回收等功能。  
Can achieve the pure electric vehicle driving, motor-assisted drive, regenerative braking energy recovery and other functions.



产品先进性 PRODUCT  
FEATURES

- 以 CVT19 变速箱为基础进行设计开发，技术成熟、成本优越；  
Design and development based on the CVT19, technology is mature, the cost is superior;
- 机械系统部件高度集成化，结构紧凑；  
Mechanical system components are highly integrated and compact;
- 混动模块功能齐全、控制灵活；  
Hybrid module fully functional, flexible control;
- 电机功率密度和扭矩密度均达到国际先进水平。  
Motor power density and torque density have reached the international advanced level.



技术参数 TECHNICAL  
PARAMETERS

型号 Model	最大输入扭矩 The maximum Input torque(N.m)	电机额定/峰值功率 Motor rated / Peak power(Kw)	电机额定/峰值扭矩 Motor rated / Peak torque(N.m)	电机额定峰值转速 Motor rated Peak speed(Rpm)	速比范围 Range of Ratio	主减速比 final Drive ratio	净重 Net Weight (Kg)	注油量 Oil capacity (L)
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CVT19 混动 hybrid	190	25/55	80/160	2984/6200	5.77	5.14	100	7.5±0.2
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匹配发动机 MATCHING  
ENGINE

1.6L .



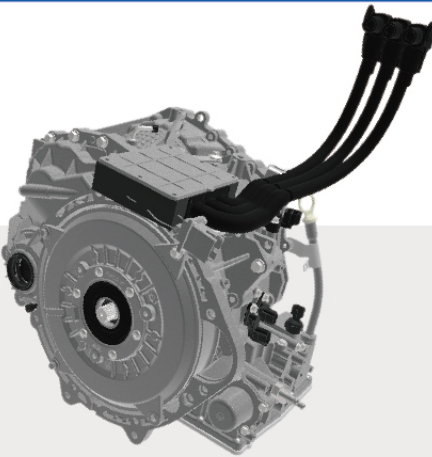
适用车型 APPLICABLE  
VEHICLES

奇瑞艾瑞泽 7e。  
Chery Arrizo7e.

WLY CVT38 PHEV  
( 在研 ) Under Development

HYBIRD CONTINUOUSLY  
VARIABLE TRANSMISSION

混合动力无级变速器



主要特点 MAIN  
FEATURES

- 用 P2 的布置形式实现了 P3 和 P2 的功能，结构简单，布置紧凑，成本低；  
The P3 function is realized by the the layout of P2, the structure is simple and the layout is compact and the cost is low;
- 通过 CVT 使发动机能始终高效工作，同时辅以电机高效工作，使得燃油经济性达到最优；  
The engine can always work efficiently by the CVT, and the motor work efficiently at the same time. So the fuel economy is optimized;
- 具备 EV、HEV、ICE、Idle charge 工作模式，并且在高压断电或失效情况下实现 ICE 模式车辆正常行驶。  
With the EV, HEV, ICE and Idle charge working mode, the vehicle can work normally at the ICE mode even if the high voltage power is insufficient or failure.



产品先进性 PRODUCT  
FEATURES

- 动力性好，电机和发动机动力可以充分发挥；  
Good accelerating performance, due to the motor and the engine power can be fully utilized;
- 节油率高，可以使电机和发动机效率得到充分利用；  
Good fuel economy, due to the motor and the engine efficiency can be fully utilized;
- 将可以很好地兼容 48V 的应用；  
Good solution for 48V hybrid technology;



技术参数 TECHNICAL  
PARAMETERS

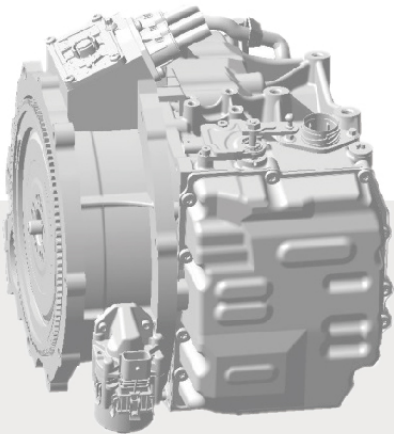
型号 Model	额定输入扭矩 Rated Input Torque/N.m	外形尺寸 Size (L*W*H)	速比范围 Ratio	技术特点 Tech Feature	电机 Electrical Machinery			外形尺寸 Model			
					峰值功率 Peak Power(Kw)	峰值扭矩 Peak Torque(Nm)	最高转速 Max Engine Speed(Rpm)				

CVT38 PHEV	380	403*578*445	7.10	P3/P2	85	300	8000	EV 模式 EV Model	HEV 模式 HEV Model	ICE 模式 ICE Model	怠速发电模式 Idling Power Generation
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# WLY 6AT28 PHEV

( 在研 ) Under Development



HYBIRD  
AUTOMATIC TRANSMISSION  
混合动力自动变速器



主要特点 MAIN FEATURES

- 采用国际主流的 P2 混动技术；一体化耦合自动变速器，乘驾舒适性高；  
Using the international mainstream P2 mixing technology, integrated coupling 6AT, great ride comfort;
- 重量轻，体积小，效率高，适用性强；  
Light weight, compact in size, high efficiency and wide application;
- 可实现整车纯电形式、电机辅助驱动、再生制动能量回收等功能。  
Can achieve the pure electric vehicle driving, motor-assisted drive, regenerative braking energy recovery and other functions.



产品先进性 PRODUCT FEATURES

- 以 FF6AT 变速箱为基础进行设计开发，技术成熟，成本优越；  
Design and development based on FF6AT, technology is mature , the cost is superior;
- 机械系统部件高度集成化，结构紧凑；  
Mechanical system components are highly integrated and compact;
- 混动模块功能齐全、控制灵活；  
Hybrid module fully functional, flexible control;
- 电机功率密度和扭矩密度均达到国际先进水平。  
Motor power density and torque density have reached the international advanced level.



技术参数 TECHNICAL PARAMETERS

型号 Model	最大输入扭矩 The max.input Torque(N.m)	电机额定/峰值功率 Motor rated / Peak power(Kw)	电机额定/峰值扭矩 Motor rated / Peak torque(N.m)	电机额定/峰值转速 Motor rated Peak speed(Rpm)	净重 Net Weight (Kg)	注油量 Oil capacity (L)
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6AT28 PHEV	280	32/53	150/250	2200/7500	105	7.2
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匹配发动机 MATCHING ENGINE

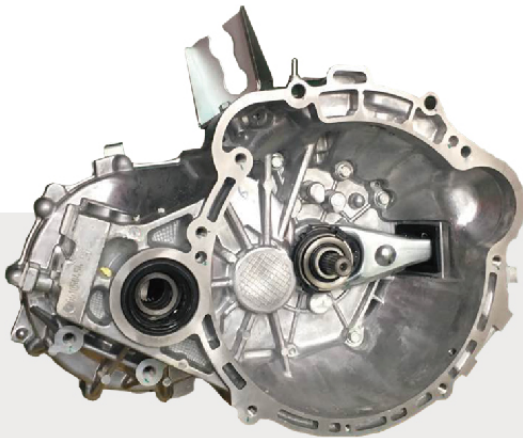
1.6L, 1.8L, 2.0L.



适用车型 APPLICABLE VEHICLES

可适用于中型乘用车，SUV,MPV 等。( Applicable to medium-sized passenger cars, SUV, MPV and so on. )  
可拓展成为四驱。( Can be further extended to AWD. )

# WLY 5MF17



PASSENGER VEHICLE  
MANUAL TRANSMISSION  
乘用车手动变速器



主要特点 MAIN FEATURES

- 换挡平顺；  
Shift smoothly;
- 酣畅淋漓的动力传递，更富有驾驶操控乐趣；  
Smooth and stable power transmission;
- 节能经济，驾乘无忧。  
Energy saving and economical.



产品先进性 PRODUCT FEATURES

- 传动效率高，达到 96% 以上，减少动力损失，提高燃油经济性；  
Transmission efficiency above 96%, reduced power loss and improved fuel economy;
- 1/2 档采用双锥同步环、3/4/5 档采用单锥螺纹同步环，提高同步容量，减小换挡冲击；  
1/2 speed dual cone synchronizing ring,3/4/5 speed single cone thread synchronizing ring, increased synchronizing capacity and reduced gear shifting impact;
- 采用滚动式定位座、聚四氟乙烯涂层衬套等提升换挡性能的机构效率；  
Adopt rolling positioning seat and PTFE coating bushing to improve efficiency of gear shifting performance;
- 集成式换挡机构总成，结构紧凑，挂摘档吸入感强，档位清晰。  
Integrated gear shifting mechanism, compact structure, strong suction and clear gear.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated Input Torque/N.m	速比 Gear ratio							匹配摩擦片直径 Friction plate dia./mm	净重 Net Weight (Kg)	注油量 Oil capacity (L)
		1	2	3	4	5	R	主减 (Final ratio)			
5MF17	172	3.55	2.16	1.35	1.03	0.91	3.08	4.31	/	33.3	2.0±0.15
5MF17	150	3.36	1.90	1.25	0.91	0.82	3.08	4.31	/	33.3	2.0±0.15
5MF17	142	3.55	1.90	1.25	0.91	0.77	3.08	3.93	φ210	33.3a	2.0±0.15
5MF17	172	3.55	1.90	1.25	0.91	0.70	3.08	4.31	φ220	33.3	2.0±0.15
5MF17	142	3.55	2.11	1.35	0.94	0.70	3.08	4.31	φ210	33.3	2.0±0.15
5MF17	180	3.36	1.90	1.25	0.91	0.70	3.08	4.31	φ210	33.3	2.0±0.15



匹配发动机 MATCHING ENGINE

吉利 4G15 发动机。( GEELY 4G15 ENGINE. )



适用车型 APPLICABLE VEHICLES

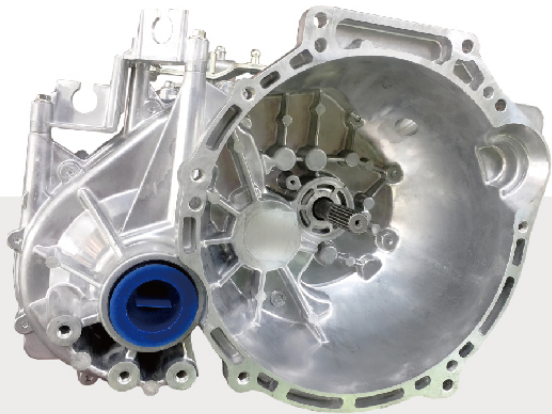
吉利远景 X6、吉利帝豪。  
Geely Vision X6、 Geely Emgrand.



WLY 5MF22

PASSENGER VEHICLE  
MANUAL TRANSMISSION

乘用车手动变速器



主要特点 MAIN FEATURES

- 重量轻，承载扭矩大；  
Lightweight, large torque capacity;
- 匹配液压分离轴承，使离合器接合更平稳，降低整车冲击感；  
Use hydraulic release bearing, make the clutch combine more smoothly, reduce vehicle impact;
- 倒档带有预同步结构，提高倒档的换挡性能。  
With the pre-synchronizing system for reverse gear, increase shifting performance of reverse gear.



产品先进性 PRODUCT FEATURES

- 优秀的 NVH 和换挡性能，提供舒适的乘坐舒适感和驾驶感；  
Good NVH and shifting performance, provide comfortable feeling and drivability;
- 合理的速比设计，让整车兼有动力性和经济性；  
Improved gear ratio design, make vehicle has good power and economic performance;
- 优秀的轴齿及同步器系统设计，使变速箱拥有卓越的耐久寿命。  
Improved gear, shaft and synchronizer system design, make the transmission has long using life.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated Input Torque/N.m	速比 Gear Ratio							净重 Net Weight (Kg)	注油量 Oil capacity (L)
		1	2	3	4	5	R	主减 (Final ratio)		

5MF22	220	3.58	1.91	1.21	0.94	0.73	3.23	3.95	35	1.95±0.15
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匹配发动机 MATCHING ENGINE

1.4T .



适用车型 APPLICABLE VEHICLES

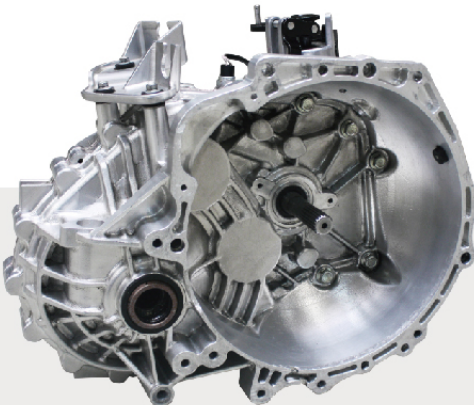
吉利远景、吉利帝豪。  
Geely Vision、Geely Emgrand.

WLY 6MF22

(在研) Under Development

PASSENGER VEHICLE  
MANUAL TRANSMISSION

乘用车手动变速器



主要特点 MAIN FEATURES

- 结构紧凑，轴向尺寸小，满足不同整车布置需求；  
Compact structure, small axial size,meet various needs of different vehicle packages;
- 速比范围宽，提高整车燃油经济性；  
Wide speed ratio range,increase fuel consumption;
- 提升换挡效率并采用大同步容量同步器，减小动态换挡力。  
Use large capacity synchronizer, increase gear shifting efficiency and reduce dynamic gear shifting force.



产品先进性 PRODUCT FEATURES

- 采用全同步器结构（含倒档），完全消除倒档难挂、打齿抱怨；  
All synchronizers for gears, including reverse gear to increase gear shifting performance;
- 运用细高齿设计理念，结合仿真分析和全磨齿工艺，整箱可靠性高、噪音小；  
High gear tooth design, simulation analyses, gear grinding process, increased reliability and NVH performance;
- 换挡机构采用集成式换挡塔，提高档位清晰度，操纵灵活、舒适；  
Use integrated gear shifting tower, clear gear selection and shifting and increased drivability;
- 提供空档开关、车速传感器、液压分离轴承等多种配置。  
Neutral switch,speed sensor, hydraulic release bearing configurations optional.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated input torque/N.m	速比 Gear Ratio								净重 Net Weight (Kg)	注油量 Oil capacity (L)
		1	2	3	4	5	6	R	主减 (Final ratio)		

6MF22	1:200	3.77	2.05	1.42	0.97	0.76	0.66	3.54	4.31	41.2	2.1±0.1
6MF22	2~6:220										
6MF22	R:150	3.77	2.05	1.42	1.03	0.85	0.61	3.54	4.31	41.2	2.1±0.1



匹配发动机 MATCHING ENGINE

1.5L、1.6L、1.8L、2.0L、1.0TD、1.2TD、1.3T、1.5T.

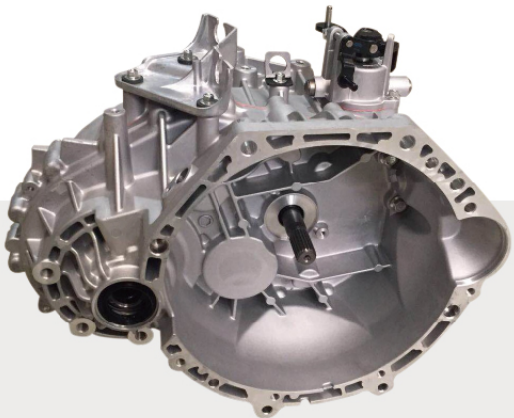


适用车型 APPLICABLE VEHICLES

东风小康风光 580、开瑞 X70/X90、吉利远景 X3。  
Fengguang580、Karry X70/X90、Geely Vision X3.



# WLY 6MF28



PASSENGER VEHICLE  
MANUAL TRANSMISSION

乘用车手动变速器



主要特点 MAIN FEATURES

- 结构紧凑，轴向尺寸小，满足不同整车布置需求；  
Compact structure, small axial size,meetvarious needs of different vehicle packages;
- 采用全同步器结构（含倒档），完全消除倒档难挂、打齿抱怨；  
All synchronizers for gears, including reverse gear to increase gear shifting performance;
- 提供档位开关、空档开关、液压分离轴承等多种配置。  
Neutral switch,speed sensor, hydraulic release bearingconfigurationsoptional.



产品先进性 PRODUCT FEATURES

- 运用细高齿设计理念，结合仿真分析和全磨齿工艺，整箱可靠性高、噪音小；  
High gear tooth design, simulation analyses, gear grinding process, increased reliability and NVH performance;
- 提升换挡效率并采用大同步容量同步器，减小动态换挡力；  
Use large capacity synchronizer, increase gear shifting efficiency and reduce dynamic gear shifting force;
- 换挡机构采用集成式换挡塔，提高档位清晰度，操纵灵活、舒适。  
Use integrated gear shifting tower, clear gear selection and shifting and increased drivability.



技术参数 TECHNICAL PARAMETERS

型号 Model	额定输入扭矩 Rated input torque/N.m	速比 Gear Ratio								净重 Net Weight (Kg)	注油量 Oil capacity (L)
		1	2	3	4	5	6	R	主减 (Final ratio)		
6MF28		3.62	1.96	1.32	1.03	0.84	0.71	3.00	4.19	45.6	2.2
6MF28	280	3.92	2.21	1.28	0.93	0.70	0.60	3.00	3.88	45.6	2.2
6MF28		3.92	2.21	1.41	1.08	0.81	0.73	3.25	4.24	45.6	2.2



匹配发动机 MATCHING ENGINE

2.0L-2.5L、1.3T-2.0T .



适用车型 APPLICABLE VEHICLES

奇瑞瑞虎 5、奇瑞艾瑞泽 5、众泰 A45。  
Chery Tiggo5、Chery Arrizo5、Zotye A45.