



**CARRARO DRIVETECH**



**Construction Equipment**

**工程机械设备**



# 卡拉罗集团介绍

## Introduction Carraro Group

卡拉罗集团是一家跨国企业，是全球动力传动系统领域的领军人。公司业务核心是设计、制造和销售先进的传动产品并提供整体传动系统解决方案，产品广泛应用于工程机械设备、农用拖拉机、物料搬运设备、轻型商用车、汽车、可再生能源及固定式设备（例如扶梯和风力发电机）。

卡拉罗集团总部位于意大利帕多瓦省Campodarsego市，集团的控股公司卡拉罗股份公司，于1995年在意大利证券交易所挂牌。集团在意大利、德国、阿根廷、美国、印度和中国均设有制造工厂。

Carraro is a multinational Group and world leader in power transmission systems. Its core business consists in conceiving, designing, validating, manufacturing and marketing drive systems for construction equipment, agricultural tractors, material handling, light commercial vehicles, automobiles, renewable energies and stationary applications (such as escalators and wind generators).

The Group, whose holding company Carraro Spa has been listed on the Italian Stock Exchange since 1995, is based in Campodarsego (Padua) and has manufacturing facilities in Italy, Germany, Argentina, the United States, India and China.

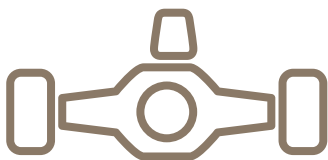
# 集团业务

## The Group Business Areas

### CARRARO DRIVETECH

综合性解决方案（车桥、变速箱、终端和回旋式传动装置），应用领域包括：矿山机械、工程机械、农用拖拉机、轻型商用车、物料搬运和固定式设备（如扶梯和风力发电机）。

Integrated solutions (axles, transmissions, final & swing drives) for a wide range of applications: mining, construction equipment, agricultural tractors, light commercial vehicles, material handling and stationary applications (such as escalators & wind energy generators).

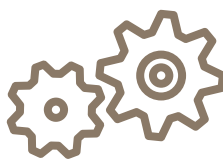


### GearWorld

A Carraro Group Company

各种尺寸的钢齿轮，烧结零部件和齿轮，产品应用于铲运机械、农用拖拉机、汽车、轻型商用车、两轮汽车、动力工具、园林机械、铁路及工业领域，还可以应用于风能和太阳能领域。

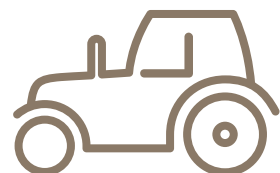
Low & high diameter steel gears, sinterized components and gears for earth-moving machines, agricultural tractors, cars, light commercial vehicles, two-wheel vehicles, power tools, garden equipment, railway and industrial applications, in particular for wind and solar energy.



### CARRARO AGRITALIA

设计和生产50至100马力的普通和果园用拖拉机。提供全方位技术服务，业务包括一般技术咨询到“交钥匙”工程。

Design and manufacturing of standard, vineyard & orchard tractors, from 50 to 100 HP; offering a wide range of engineering services, from simple consultancy to “turnkey” projects.



### SANTERNO CARRARO GROUP

逆变器和动力控制、换频器，用于工业厂房、自动化设备、可再生能源管理（光伏和风能）、混合动力车辆动力系统的电子应用。

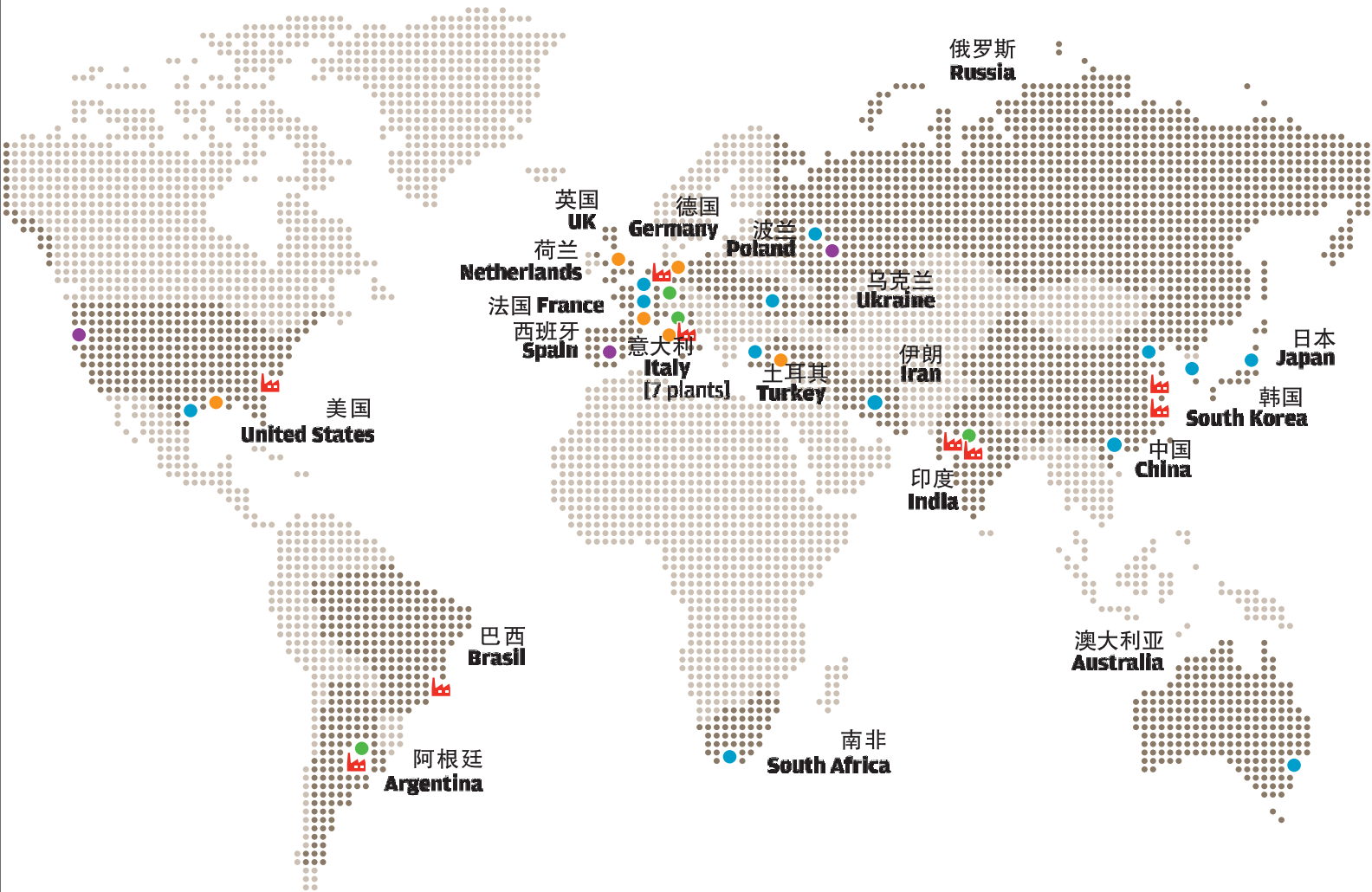
Inverters and power control, frequency converters, applied electronics for industrial plants, automation, renewable energies management (photovoltaic & wind energy), hybrid and electric vehicle powertrains.



# 全球分布

## Global footprint

### Where we are



说明	HIGHLIGHTS
制造工厂	Manufacturing sites
分支	Branches
研发中心	Engineering Centers
经销商	Dealers
售后服务中心	Service providers

# 卡拉罗传动技术 动力传动系统和减速机

## Carraro Drive Tech Drivelines & Drives

卡拉罗传动技术公司负责卡拉罗集团核心业务，设计制造并销售动力传动系统、车桥和变速箱、行走和切削减速机及电子控制单元。

无论是非公路还是公路车辆，卡拉罗传动技术公司都会提供综合性传动系统解决方案，为农业机械、建筑机械、矿山机械和物料搬运机械提供全方位、多样化的产品支持。

Carraro Drive Tech is the Business Unit managing the Carraro Group core business: designing, manufacturing and marketing drivelines, axles and transmissions, travel & cutter drives and electronic control units.

Wherever there is a need for integrated transmission systems for off- and on-highway vehicles, Carraro Drive Tech has the solution, with a complete, diversified product range for agriculture, construction equipment, mining, and material handling.

卡拉罗动力传动系统为每个市场的应用特别优化定制，以保证产品的性能水平并提供最实用的设计布局。

卡拉罗的产品将刚性和转向车桥相结合，并搭配机械、自动或半自动变速箱，使产品得到广泛应用。产品专门设计成在先进电子控制单元监控下的机械和液压一体化系统，能在监控和诊断车辆功能的同时更好的掌控整个动力传动系统。

Carraro drivelines have been optimised for the individual markets of application, to guarantee the very best efficiency and most practical vehicle layout.

All this is possible thanks to the wide range of combinations of rigid and steering axles and mechanical, automatic or semi-automatic transmissions. The Carraro systems have been designed for the optimal integration of mechanics and hydraulics, under the supervision of an advanced electronic control unit. This can best manage the whole driveline while monitoring and diagnosing the vehicle functions.

# 解决方案

## Our solutions

前桥和后桥，组装或整体结构，转向或刚性，带或不带一体式独立悬挂，物料搬运传动系统

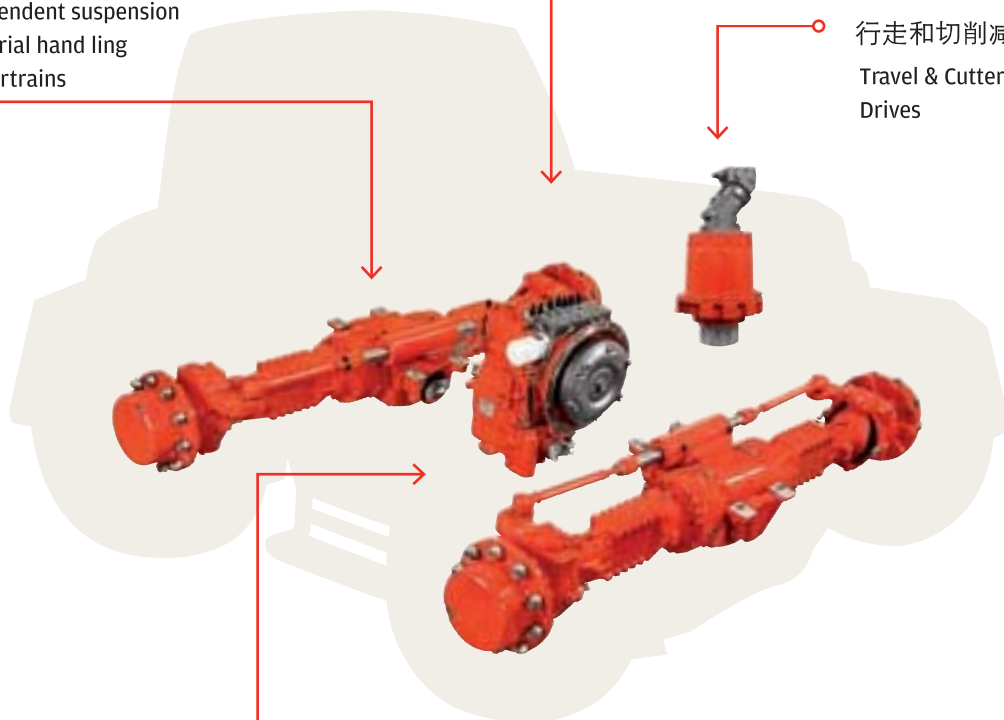
Front & Rear Axles, modular or monolithic structure, steering or rigid, with or without integrated independent suspension material handling powertrains

变速箱和传动系管理的电子控制单元

Electronic Control Units for Transmissions & Powertrains Management

行走和切削减速机

Travel & Cutter Drives



用于工程机械的同步器换挡、动力同步和动力转换变速箱，农用拖拉机底盘，并有持续扭矩技术 (VaryT)

Synchro Shuttle, Power Synchro & Power Shift transmissions for Construction Equipment, transaxles for Agricultural tractors, also with VaryT version

# 卡拉罗传动技术 应用于工程机械设备的动力传动系统

## Carraro Drive Tech Drivelines for Construction Equipment Applications

得益于与全球主要非公路机械制造商的长久固定合作，卡拉罗传动技术公司目前已经开发了工程设备中所有应用的技术解决方案，逐渐巩固住自己作为一个高效可靠的全线合作伙伴的地位。变速箱、车桥和减速机的恰当结合，使今日的卡拉罗可以为挖掘装载机、叉车、装载机、挖掘机、夯实机、履带式车辆和其他轮式车辆提供全系列动力传动系统解决方案。

Thanks to a solid, long-lasting collaboration with major international constructions of off-highway applications, Carraro Drive Tech has now developed a consolidated know-how in the development of integrated systems devoted to all applications in the construction equipment sector, firmly positioning itself as a highly reliable full-liner partner.

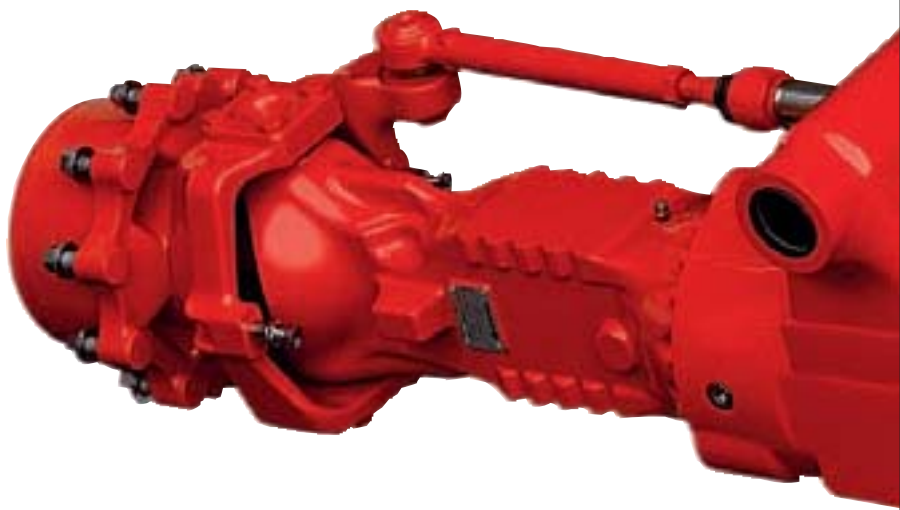
An appropriate combination of transmissions, axles and drives today allows Carraro to offer a complete range for backhoe loaders, forklift trucks, wheel loaders, excavators, compactors, tracked vehicles and other wheeled and tracked applications.

动力电子设备技术的发展使卡拉罗传动技术公司有机会将自己的传动系统和管理方式相结合，更有效的保证其动力传动系统高效统一运行。

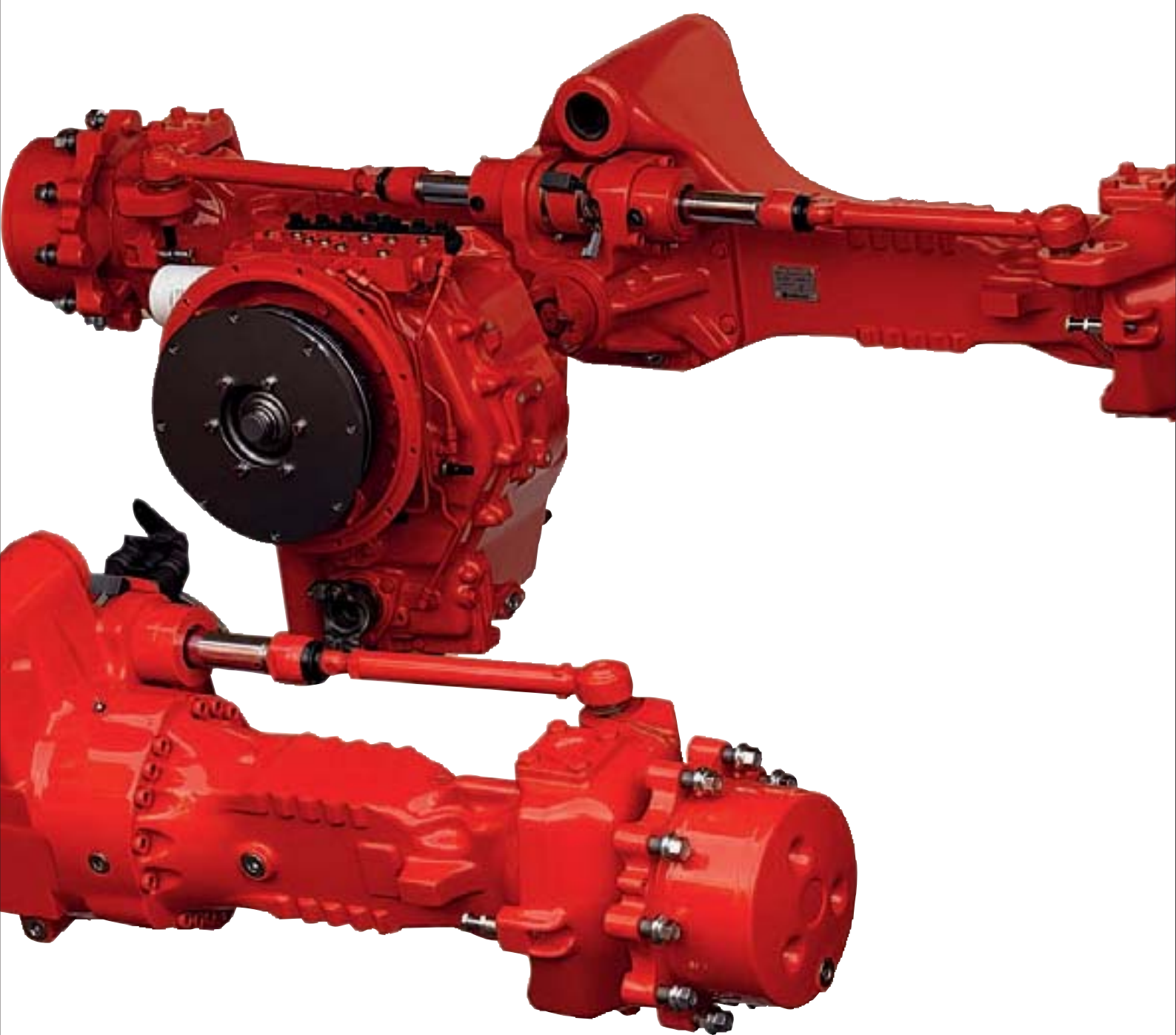
整个系统的全方位控制让使用者能简单快捷的对整机进行操作，同时为整个系统提高生产效率并降低机器损耗。

The skills developed in power electronics further allow Carraro Drive Tech to integrate their transmission systems with evolved management solutions as a guarantee of an efficient integration of drivelines.

The full control of the system allows for the best possible management of the ergonomics and simplicity of use by the end user, at the same time also improving the efficiency of the entire system both in terms of productivity and reduction of machine consumption.









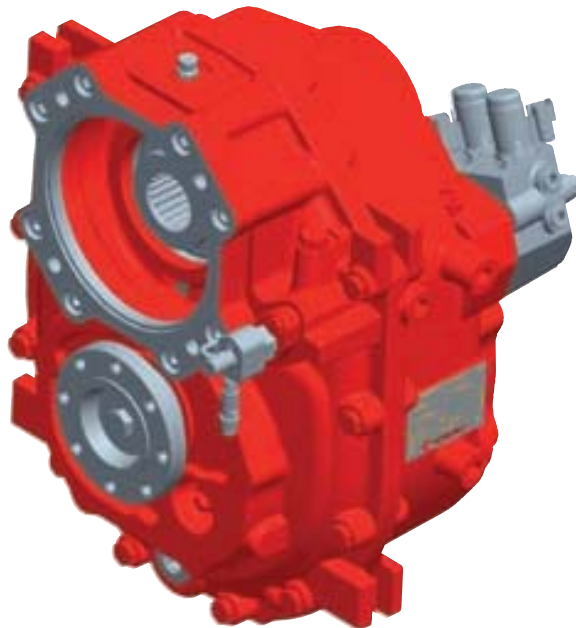
**变速箱**

**Transmissions**

# 液压变速箱

## Hydrostatic Transmissions

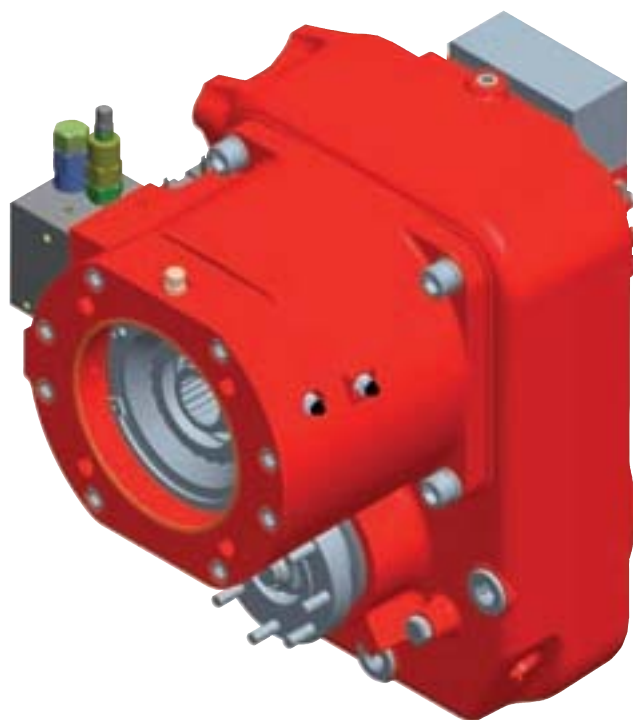
型号 MODEL		TB172	TB172/2
描述 Description		单速 Single speed	两速同步 Two speed synchro
发动机中心线下移 Output drop from engine	mm	172	172
输入界面 Input interfaces cc		液压马达 Hydraulic motors	液压马达 Hydraulic motors
		80/160	80/160
		SAE 1410/1480	SAE 1410/1480
		DIN 13010/1410	DIN 1410
减速比 Reduction ratios		2.750:1	1 <sup>st</sup> 2 <sup>nd</sup>
		2.031:1	4.286:1 1.359:1
		1.853:1	2.971:1 1.273:1
		1.553:1	
		1.545:1	
		1.179:1	
最大输入 Max Input	rpm	5,500	5,500
最大输入扭矩 Max Input torque	Nm	1,100	1,100
停车制动类型 Park brake type		手动操作干式楔型制动 Dry discs manual control ball and ramp type	
备注 Note		TB 172/2两种版本均可：停车换档和速度换档 TB172/2 is available in two versions: Stop&Go and Speed Shift	



# 液压动力换档变速箱

## Hydrostatic Powershift Transmissions

型号 MODEL		CV2	FLS 3.2	LS 4.2
描述 Description		两速变档 2 speed power shift	两速变档 2 speed power shift	两速变档 2 speed power shift
发动机中心线下移 Output drop from engine	mm	182	185	176
输入界面 Input interfaces cc		液压马达 Hydraulic motor	液压马达 Hydraulic motor	液压马达 Hydraulic motor
		80/107	107	80/140
减速比 Reduction ratios		1 <sup>st</sup> 2 <sup>nd</sup>	1 <sup>st</sup> 2 <sup>nd</sup>	1 <sup>st</sup> 2 <sup>nd</sup>
		9-1 37:1      2.400:1	4,217      1.022	5.143:1      1.371:1
		4.310:1      1.132:1		4.934:1      1.316:1
				4.423:1      1.179:1
最大输入 Max Input	rpm	5,500	5,500	5,500
最大输入扭矩 Max Input torque	Nm	770	770	1,100
停车制动类型 Park brake type		内部湿式SAHR Wet Inboard SAHR		



# 液力变速箱 同步换档

## Torque Converter Transmissions Synchro Shuttle

主要技术数据	MAIN TECHNICAL DATA	TLB1 2WD				TLB1 4WD			
额定功率	Power Rating	82 kW @ 2,200 rpm				82 kW @ 2,200 rpm			
最大输入扭矩	Max input Torque	750 Nm				750 Nm			
最大输入转速	Max input speed	2,400 rpm				2,400 rpm			
内部油泵类型	Internal Pump Type	齿轮 Gear				齿轮 Gear			
发动机飞轮连接方式	Engine Flywheel Interface	SAE 3				SAE 3			
输出法兰类型	Output Flage Type	Yoke 1410				Yoke 1410			
2驱输出法兰在发动机飞轮中心线下	2WD output drop from Engine	180 mm				180 mm			
4驱输出法兰在发动机飞轮中心线下	4WD output drop from Engine	-				323 mm			
车辆取力泵连接方式	Vehicle Pump Interface	SAE C				SAE C			
变矩器尺寸	Torque Converter Size	W300				W300			
档位	Speed Gear	4 Fwd + 4 Rev				4 Fwd + 4 Rev			
前进/后退可选速比	Fwd/Rev Ratios Option	1:1 / 1:0.829				1:1 / 1:0.829			
前进档速比	Fwd Speed Gear Ratios	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
		5.603:1	3.481:1	1.585:1	0.793:1	5.603:1	3.481:1	1.585:1	0.793:1
前进和后退可选速比	MFD Ratio Options	-				0.8:1 / 0.818:1 / 0.895:1			
电控	Electronic Control	无 No				无 No			
倒档	Reverser	动力倒档 Power Reverse				动力倒档 Power Reverse			
换档方式	Gear Shifting	同步倒档 Synchro Shuttle				同步倒档 Synchro Shuttle			
接合方式	MFD Connection Options	-				SAHR 离合器/SAHR 啮合套 SAHR Dog Clutch / SAHR Collar Shift			
可选停车制动	Parking Brake Options	无/SAHR湿式盘/手动湿式盘 None / SAHR Wet Discs / Manual Wet Discs				无/SAHR湿式盘/手动湿式盘 None / SAHR Wet Discs / Manual Wet Discs			
滤清器安装方式	Spin-On Oil Filter Options	卧式/立式/远程 Horizontal / Vertical / Remote				卧式/立式/远程 Horizontal / Vertical / Remote			
系统电压	Electric System Voltage	12V				12V			
差速锁电磁阀	Differential Lock Solenoid	控制阀上装配 On Control Valve Assy				控制阀上装配 On Control Valve Assy			
制动输入输出压力	Power Brake in/out Ports	15 bar nom.				15 bar nom.			
速度传感器	Speed Sensor	可提供 Available				可提供 Available			
温度传感器	Temperature Sensor	可提供 Available				可提供 Available			
压力传感器	Pressure Sensor	可提供 Available				可提供 Available			
线束	Electrical Harness	N/A				N/A			



# 液力变速箱 动力同步

## Torque Converter Transmissions Power Synchro

主要技术数据 MAIN TECHNICAL DATA		TLB1 SPS				TLB1 SPS Coaxial			
额定功率	Power Rating	82 kW @ 2,200 rpm				82 kW @ 2,200 rpm			
最大输入扭矩	Max input Torque	750 Nm				750 Nm			
最大输入转速	Max input speed	2,400 rpm				2,400 rpm			
内部油泵类型	Internal Pump Type	齿轮 Gear				齿轮 Gear			
发动机飞轮连接方式	Engine Flywheel Interface	SAE 3				SAE 3			
输出法兰类型	Output Flange Type	Yoke 1410				Yoke 1410			
2驱输出法兰在发动机飞轮中心线下	2WD output drop from Engine	180 mm				180 mm			
4驱输出法兰在发动机飞轮中心线下	4WD output drop from Engine	323 mm				334 mm			
车辆取力泵连接方式	Vehicle Pump Interface	SAE C				SAE C			
变矩器尺寸	Torque Converter Size	W300				W300			
档位	Speed Gear	4 Fwd + 4 Rev				4 Fwd + 4 Rev			
前进/后退可选速比	Fwd/Rev Ratios Option	1:1 / 1:0.829				1:1 / 1:0.829			
前进档速比	FWD Speed Gear Ratios	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
		5.603:1	3.481:1	1.585:1	0.793:1	5.603:1	3.481:1	1.585:1	0.793:1
前进和后退可选速比	MFD Ratio Options	0.8:1 / 0.818:1 / 0.895:1				1:1			
电控	Electronic Control	是 Yes				是 Yes			
倒档	Reverser	动力倒档 Power Reverse				动力倒档 Power Reverse			
换档方式	Gear Shifting	伺服动力同步换档 Servo Power Synchro				伺服动力同步换档 Servo Power Synchro			
可选接合方式	MFD Connection Options	SAHR 离合器/SAHR 啮合套 SAHR 湿式离合器 SAHR Dog Clutch / SAHR Collar Shift SAHR Wet Clutch				持久/SAHR 离合器 SAHR啮合套/SAHR 离合器 Permanent / SAHR Dog Clutch SAHR Collar Shift / SAHR Wet Clutch			
可选停车制动	Parking Brake Options	无/SAHR湿式盘/手动湿式盘 None / SAHR Wet Discs / Manual Wet Discs				无/SAHR湿式盘/手动湿式盘 None / SAHR Wet Discs / Manual Wet Discs			
滤清器安装方式	Spin-On Oil Filter Options	立式/远程 Vertical / Remote				立式/远程 Vertical / Remote			
系统电压	Electric System Voltage	12V				12V			
差速锁电磁阀	Differential Lock Solenoid	控制阀上装配 On Control Valve Assy				控制阀上装配 On Control Valve Assy			
制动输入输出压力	Power Brake in/out Ports	15 bar nom.				15 bar nom.			
速度传感器	Speed Sensor	有 Yes				有 Yes			
温度传感器	Temperature Sensor	有 Yes				有 Yes			
压力传感器	Pressure Sensor	有 Yes				有 Yes			
线束	Electrical Harness	可提供 Available				可提供 Available			



# 液力变速箱 动力换挡

## Torque Converter Transmissions Power Shift

主要技术数据	MAIN TECHNICAL DATA	TLB2	TLB2 Coaxial
额定功率	Power Rating	82 kW @ 2,200 rpm	82 kW @ 2,200 rpm
最大输入扭矩	Max input Torque	750 Nm	750 Nm
最大输入转速	Max input speed	2,400 rpm	2,400 rpm
内部油泵类型	Internal Pump Type	齿轮 Gear	齿轮 Gear
发动机飞轮连接方式	Engine Flywheel Interface	SAE 3	SAE 3
输出法兰	Output Flange Type	Yoke 1410	Yoke 1410
2驱输出法兰在发动机 飞轮中心线下	2WD output drop from Engine	188 mm	188 mm
4驱输出法兰在发动机 飞轮中心线下	4WD output drop from Engine	350 mm	350 mm
车辆取力泵连接方式	Vehicle Pump Interface	SAE C	SAE C
变矩器尺寸	Torque Converter Size	W300	W300
档位	Speed Gear	4 Fwd + 4 Rev	4 Fwd + 4 Rev
前进后退可选速比	Fwd/Rev Ratios Option	1:1 / 1:0.829	1:1 / 1:0.829
前进档速比	FWD Speed Gear Ratios	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup> 4 <sup>th</sup> 5.533:1 3.359:1 1.533:1 0.811:1	1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup> 4 <sup>th</sup> 4.426:1 2.687:1 1.226:1 0.649:1
前进和后退可选速比	MFD Ratio Options	0.804:1	1:1
电控	Electronic Control	是 Yes	是 Yes
倒档	Reverser	动力倒档 Power Reverse	动力倒档 Power Reverse
换挡方式	Gear Shifting	动力换挡 Power Shift	动力换挡 Power Shift
可选接合方式	MFD Connection Options	SAHR 离合器/SAHR 啮合套 SAHR Wet Clutch	持久/SAHR 湿式离合器 Permanent / SAHR Wet Clutch
可选停车制动	Parking Brake Options	无/SAHR湿式盘/手动湿式盘 None / SAHR Wet Discs / Manual Wet Discs	无/SAHR湿式盘/手动湿式盘 None / SAHR Wet Discs / Manual Wet Discs
滤容器安装方式	Spin-On Oil Filter Options	卧式/立式/远程 Horizontal/Vertical/Remote	卧式/立式/远程 Horizontal/Vertical/Remote
系统电压	Electric System Voltage	12V	12V
差速锁电磁阀	Differential Lock Solenoid	控制阀上装配 On Control Valve Assy	控制阀上装配 On Control Valve Assy
制动输入输出压力	Power Brake in/out Ports	15 bar nom.	15 bar nom.
速度传感器	Speed Sensor	是 Yes	是 Yes
温度传感器	Temperature Sensor	是 Yes	是 Yes
压力传感器	Pressure Sensor	是 Yes	是 Yes
线束	Electrical Harness	可提供 Available	可提供 Available





# 电子控制单元

## Electronic Control Unit

### 变速箱控制系统 TRAX

#### 变速箱管理模式 Transmission Advanced Control System

变速箱管理模式	Transmission management mode	半自动：有驾驶者管理 自动：全自动变速	Semiautomatic: management by driver Automatic: full automatized gearshift
用户定制的整车相应功能	Vehicle responsiveness customization	平稳或直接的离合器缓冲模式 根据客户要求配置软件	Smooth or direct clutch modulation Configurable software by customers needs
预防性自动诊断系统	Prevention autodiagnostic system	过载或输入错误警报器和错误信号 安全管理SIL1/ISO13849 Perf. C级	Alarm / Error signal for excessive working parametres and wrong inputs / Safety Management SIL1/ISO13849 Perf. level C
辅助功能	Auxiliary functions	差速锁和转向传感器控制 内置电子仪表盘数据交换功能 CAN J1939串口诊断和服务	Differential lock and steering sensor control Data interchange with electronic dashboard platform, CAN J1939, Serial line diagnostic and servicing

### 一般参数 General

工作温度	Operating Temperature	- 40 / + 85 °C
存放温度	Storage Temperature	- 40 / + 85 °C
防护等级	Protection Rating	IP 67

### 电气参数 Electrical

额定供电电压	Nominal Supply Voltage	12 Vdc	
模拟供电电压	Analog Voltage Input Range	0 / 5 Vdc	
额定数字式输出电流	Rated Digital Output Current	2 A	
额定PWM输出电流	Rated PWM Output Current	2 A	
额定PWM输出频率	Rated PWM Output Frequency	4 kHz	
叠加频率	Superimposed Dither Frequency	可用软件调节	SW-adjustable
叠加电流	Superimposed Dither Amplitude	可用软件调节	SW-adjustable
通讯接口	Serial Interface Communication	RS232同步，根据SAE J1939 / ISO 11783 / ISO 11898 CAN 接口	RS232, asynchronous, one CAN interface according to SAE J1939 / ISO 11783 / ISO 11898

### 壳体参数 Housing

电气连接	Electrical Connections	56针插座	56 pins board-mounted
壳体材料	Housing Material	耐高温尼龙（黑色）	High temperature nylon (Black)
重量	Weight	0.25 Kg（仅供参考）	0.25 Kg (for reference only)



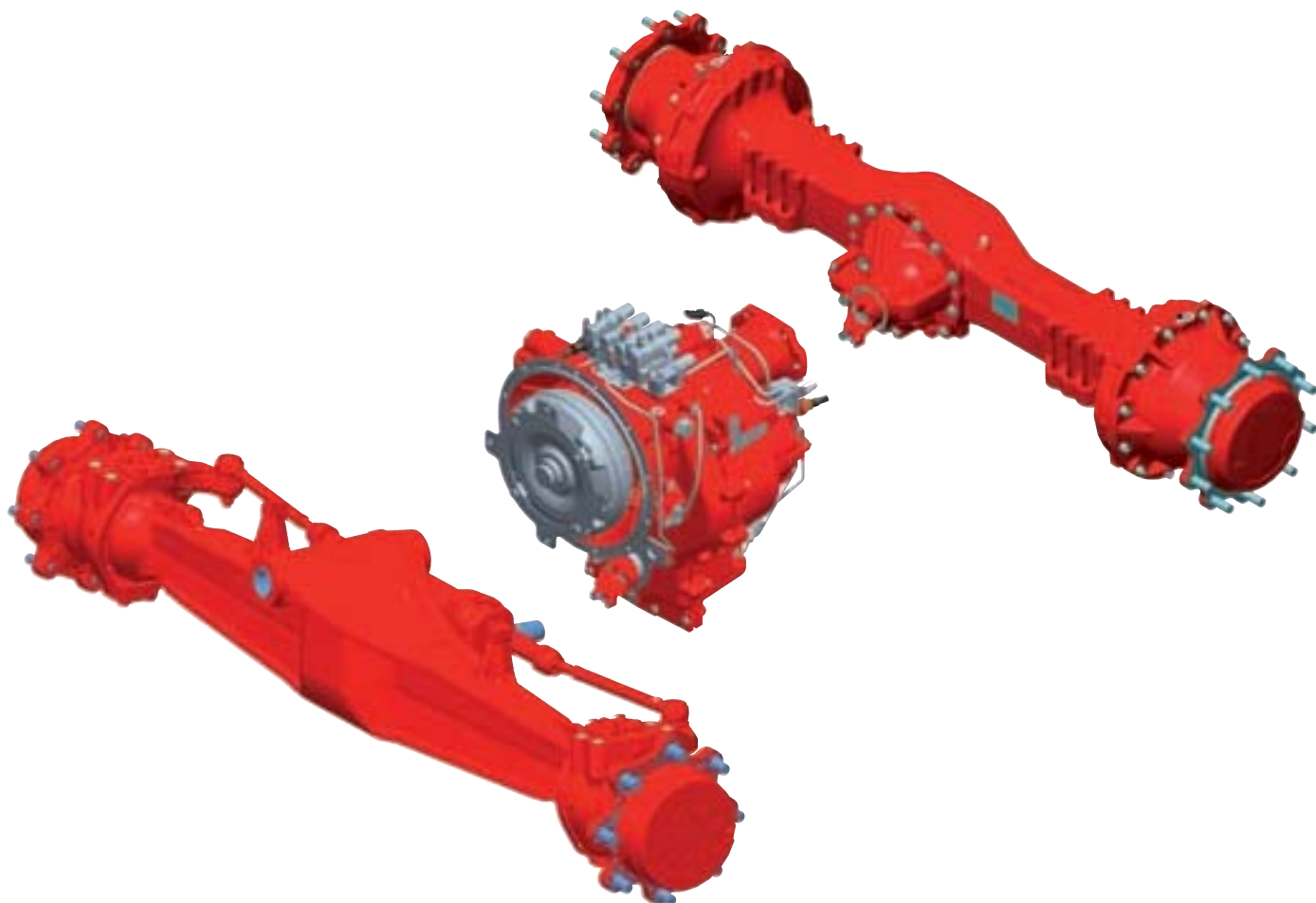
# 传动系统 Drivelines

# 挖掘装载机传动系统

## Backhoe loaders drivelines

两轮转向机型 2WS machine	前桥 Front axle	后桥 Rear axle	变速箱 Transmission
发动机功率 Engine power kW			
From 50 up to 70	26.16	28.32 M 28.40 FR	TLB1
From 71 up to 77	26.22	28.43 M 28.44 FR	TLB1 SPS
From 78 up to 88	26.24	28.50 FR	TLB2

四轮转向机型 4WS machine	前桥 Front axle	后桥 Rear axle	变速箱 Transmission
发动机功率 Engine power kW			
From 71 up to 77	26.32	26.43 M	TLB1 SPS
From 78 up to 88	26.43	26.43 M	TLB2



**2WS BHL FRONT STEER MODEL**

型号 MODEL		<b>26.00</b>	<b>26.16</b>	<b>26.22</b>	<b>26.24</b>
宽度 Overall width	mm	1,900 2,000	1,980 2,080	2,080	2,165 2,080
轮辋安装法兰距离 Flange to flange distance	mm	1,820 1,910	1,820 1,920	1,920	1,905 1,920
轮辋安装尺寸 Wheel mounting dimension	mm	n° 8 5/8"-18 on 203.2 mm ø	n° 8 M18x1.5 on 275 mm ø	n° 8 M18x1.5 on 275 mm ø	n° 8 M18x1.5 on 275 mm ø
最大转向角度 Max steering angle		60°	55°	55°	55°
最大扭矩 Peak torque	kNm	-	24	31	34
最大行使载荷 Dynamic load capacity	kN	80	80	95	95
最大承载能力 Static load capacity	kN	200	200	2375	2375

**2WS BHL REAR RIGID MODEL**

型号 MODEL		<b>28.40 FR</b>	<b>28.44 FR</b>	<b>28.50 FR</b>	<b>28.32 M</b>	<b>28.43 M</b>
宽度 Overall width	mm	1,784	1,930	1,930	1,860 2,006 2,106	1,913 2,060 2,160
轮辋安装法兰距离 Flange to flange distance	mm	1,654	1,800 1,654	1,800	1,654 1,800 1,900	1,654 1,800 1,900
轮辋安装尺寸 Wheel mounting dimension	mm	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø
最大扭矩 Peak torque	kNm	56	62	70	45	60
最大行使载荷 Dynamic load capacity	kN	75	80	95	75	80
最大承载能力 Static load capacity	kN	1875	200	2375	1875	200

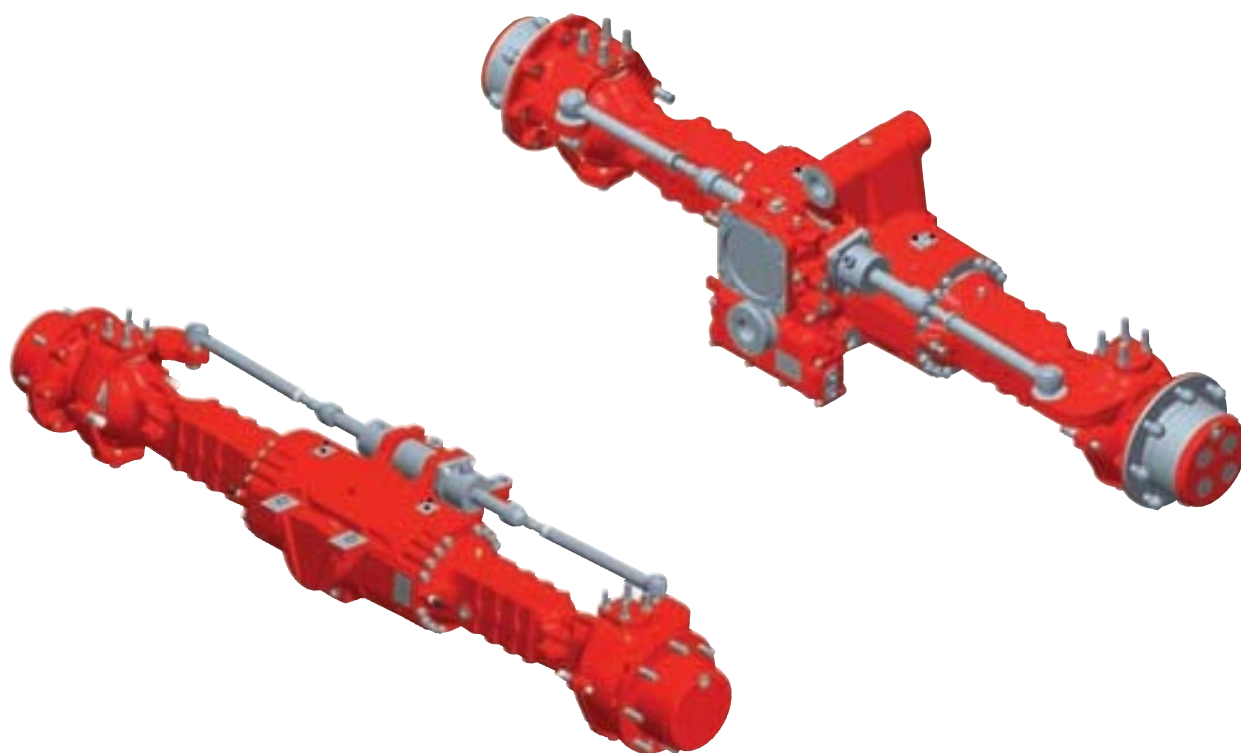
**4WS BHL MODEL**

型号 MODEL		<b>26.32</b>	<b>26.43</b>	<b>26.32 M</b>	<b>26.43 M</b>
宽度 Overall width	mm	2,105 2,350	2,105 2,350	2,105 2,350	2,105 2,350
轮辋安装法兰距离 Flange to flange distance	mm	1,900 2,145	1,900 2,145	1,900 2,145	1,900 2,145
轮辋安装尺寸 Wheel mounting dimension	mm	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø
最大转向角度 Max steering angle		45°	45°	45°	45°
最大扭矩 Peak torque	kNm	45	60	45	60
最大行使载荷 Dynamic load capacity	kN	90	100	75	100
最大承载能力 Static load capacity	kN	225	250	1875	250

# 伸缩臂叉车装车传动系统

## Telehandlers drivelines

举升能力 Lift capacity kg	前桥 Front axle	后桥 Rear axle	变速箱类型	Transmission type
Up to 1,500	26.09M	26.09M	TB135液力单速	TB135 Hydrostatic single speed
From 1,500 to 2,500	26.16M	26.16	TB172液力单速 TB172-2液力双速	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed
From 2,500 to 3,000	26.20M	26.20	TB172液力单速 TB172-2液力双速	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed
From 3,000 to 3,500	26.25M	26.25	TB172液力单速 TB172-2液力双速	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed
From 3,500 to 4,000	26.27M	26.27M	TB172液力单速 TB172-2液力双速 TLB1 SPS 四速伺服动力同步 TLB2 四速动力换挡	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed TLB1 SPS four speed servo power synchro TLB2 four speed power shift
From 4,000 to 4,500	26.32M	26.32M	TB172液力单速 TB172-2液力双速 TLB1 SPS 四速伺服动力同步 TLB2 四速动力换挡	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed TLB1 SPS four speed servo power synchro TLB2 four speed power shift
From 4,500 to 5,000	26.43M	26.43M	TB172液力单速 TB172-2液力双速 TLB1 SPS 四速伺服动力同步 TLB2 四速动力换挡	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed TLB1 SPS four speed servo power synchro TLB2 four speed power shift
From 5,000 to 5,500	26.50M	26.50M	TB172液力单速 TB172-2液力双速 TLB1 SPS 四速伺服动力同步 TLB2 四速动力换挡	TB172 Hydrostatic single speed TB172-2 Hydrostatic dual speed TLB1 SPS four speed servo power synchro TLB2 four speed power shift



型号 MODEL	26.09	26.16	26.20	26.25
轮辋安装法兰距离 mm Flange to Flange distance	1,155 1,247	1,640	1,580 1,640 1,680 1,800 1,900	1,832 1,932
轮辋安装尺寸 Wheel mounting dimension	n° 8 M18 x 1.5 on 203.5 mm ø	n° 8 M18 x 1.5 on 275 mm ø	n° 8 M18 x 1.5 on 275 mm ø	n° 8 M20 x 1.5 on 275 mm ø
终传动减速比 Total ratio	12.5:1 - 21.5:1	10.7:1 - 19.2:1	10.7:1 - 19.2:1	10.7:1 - 19.2:1
最大转向角度 Max steering angle	40°	40°	40°	45°
制动 Brakes	干式盘 Dry disc	干式盘 湿式多盘 Dry disc Wet multi-disc	干式盘 湿式多盘 Dry disc Wet multi-disc	干式盘 湿式多盘 Dry disc Wet multi-disc
差速 Differential	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock
最大扭矩 Peak Torque	kNm 12	22	28	35
最大行使载荷 Dynamic Load	kN 45	70	70	85
最大承载能力 Static Load	kN 112.5	175	175	212.5

型号 MODEL	26.27	26.32	26.43	26.50
轮辋安装法兰距离 mm Flange to Flange distance	1,920 2,050 2,180	1,950	2,180	2,100
轮辋安装尺寸 Wheel mounting dimension	n° 8 M20 x 1.5 on 275 mm ø	n° 10 M22 x 1.5 on 335 mm ø	n° 10 M22 x 1.5 on 335 mm ø	n° 10 M22 x 1.5 on 335 mm ø
终传动减速比 Total ratio	14,3:1 - 23,3:1	17,1:1 - 23,3	17,1:1 - 23,3	23,0:1
最大转向角度 Max steering angle	55°	55°	55°	55°
制动 Brakes	干式盘 Dry disc Wet multi-disc	干式盘 湿式多盘 Dry disc Wet multi-disc	干式盘 湿式多盘 Dry disc Wet multi-disc	干式盘 湿式多盘 Dry disc Wet multi-disc
差速 Differential	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock	限滑系统 机械差速锁 Open Limited slip system Mechanical diff. lock
最大扭矩 Peak Torque	kNm 37	44	60	70
最大行使载荷 Dynamic Load	kN 85	105	105	125
最大承载能力 Static Load	kN 212.5	275	275	312.5

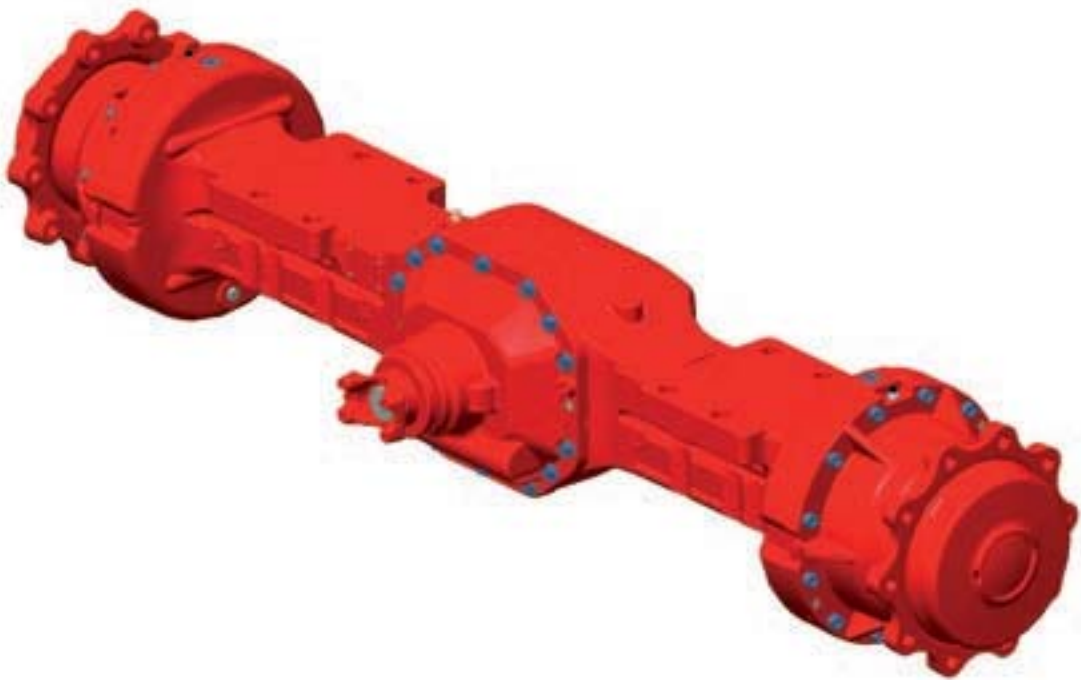
所有型号可配备  
ALL MODELS AVAILABLE WITH

车架连接 Frame MTG	中心摆动 固定垫片 Center oscill. TRU Fixed pads	
行车制动 Service brakes	湿式多盘 Wet immersed disc	
停车制动 Parking brake	SAUHR湿式多盘 机械干式盘 SAUHR wet immersed disc Mechanical dry disc	

# 轮式装载机驱动桥

## Wheel loaders axles

整机操作重量 Machine operative weight kg	发动机功率 Engine power kW	前驱动桥型号 Front axle model	后驱动桥型号 Rear axle model
7,000	70	28.32	28.32
8,500	81	28.44	28.44
10,000	96	28.56	28.56
12,500	118	28.64	28.64





型号 MODEL		28.32	28.44
宽度 Overall width	mm	2,050	1,930
轮辋安装法兰距离 Flange to flange distance	mm	1,800	1,800
轮辋安装尺寸 Wheel mounting dimension	mm	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø
最大扭矩 Peak torque	kNm	44.8	62
最大行使载荷 Dynamic load capacity	kN	100	110
最大承载能力 Static load capacity	kN	250	275

		28.50	28.56	28.64
宽度 Overall width	mm	1,930	2,070	2,070
轮辋安装法兰距离 Flange to flange distance	mm	1,800	1,930	1,930
轮辋安装尺寸 Wheel mounting dimension	mm	n° 10 M22x1.5 on 335 mm ø	n° 10 M22x1.5 on 335 mm ø	n° 12 M22x1.5 on 425 mm ø
最大扭矩 Peak torque	kNm	70	78	88
最大行使载荷 Dynamic load capacity	kN	110	120	140
最大承载能力 Static load capacity	kN	275	300	350

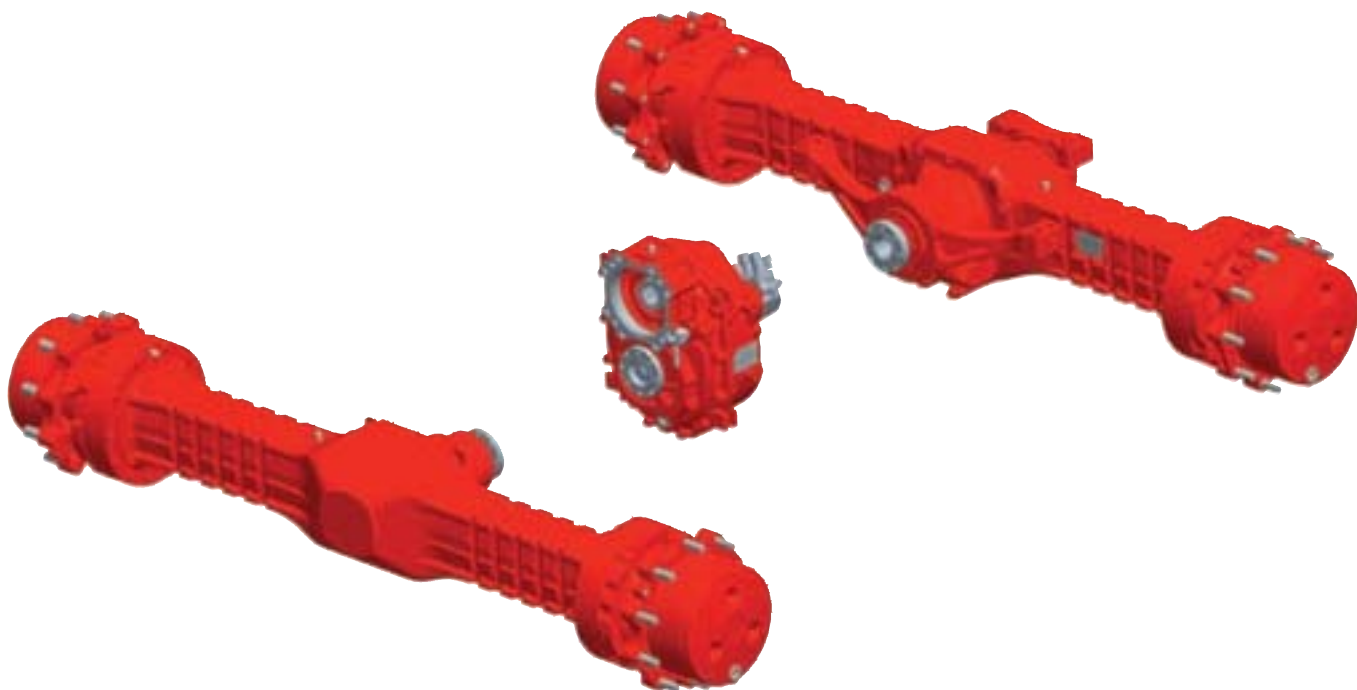
**所有型号可配备  
ALL MODELS AVAILABLE WITH**

刚性车架 Frame MTG	连接法兰 摆动安装 Rigid with pads / Offset oscill. ACP
行车制动 Service brakes	湿式多盘 Wet immersed disc

# 迷你紧凑型轮式装载机驱动桥

## Mini & Compact wheel loaders axles

整机操作重量 Machine operative weight kg	发动机功率 Engine power kW	前驱动桥型号 Front axle model	后驱动桥型号 Rear axle model	变速箱 Transmissions
<b>链接车架 Articulated Frame</b>				
3,500	37	28.09	28.09	TB135 / TB172 TB138-2 / TB172-2
5,500	51	28.16	28.16	TB135 / TB172 TB138-2 / TB172-2
6,500	63	28.25	28.20	TB135 / TB172 TB138-2 / TB172-2
7500	66	28.28	28.28	TB135 / TB172 TB138-2 / TB172-2
<b>四轮转向 Four Wheels Steering</b>				
3,500	37	26.09	26.09	TB135 / TB172 TB138-2 / TB172-2
5,500	51	26.16	26.16	TB135 / TB172 TB138-2 / TB172-2
6,500	63	26.25	26.20	TB135 / TB172 TB138-2 / TB172-2
7500	74	26.28	26.28	TB135 / TB172 TB138-2 / TB172-2



型号 MODEL		28.09	28.16	28.20	28.25	28.28
<b>链接车架</b> Articulated Frame						
宽度 Overall width	mm	1,400 1,550	1,550 1,650	1,570 1,810 1,910	1,570 1,810 1,910	1,640 1,840 1,940
轮辋安装法兰距离 Flange to flange distance	mm	1,250 1,400	1,400 1,500	1,430 1,570 1,760	1,430 1,570 1,760	1,430 1,630 1,730
轮辋安装尺寸 Wheel mounting dimension	mm	n° 6 M18x1.5 on 205 mm ø	n° 8 M18x1.5 on 275 mm ø	n° 8 M20x1.5 on 275 mm ø	n° 8 M20x1.5 on 275 mm ø	n° 10 M22x1.5 on 335 mm ø
最大扭矩 Peak torque	kNm	14	25	30	36	40
最大行使载荷 Dynamic load capacity	kN	40	55	90	90	100
最大承载能力 Static load capacity	kN	100	137	225	225	250

型号 MODEL		26.09C	26.09	26.16	26.20	26.25	26.28
<b>四轮转向</b> Four wheel steering							
宽度 Overall width	mm	1,125	1,320	1,660	1,660 1,800	1,660 1,800	1,935 2,155
轮辋安装法兰距离 Flange to flange distance	mm	1,020	1,155	1,500	1,500 1,640	1,500 1,640	1,680 1,900
转向主销距 King pin distance	mm	795	930	1,162	1,190 1,330	1,190 1,330	1,330 1,550
轮辋安装尺寸 Wheel mounting dimension	mm	n° 6 M18x1.5 on 205 mm ø	n° 6 M18x1.5 on 205 mm ø	n° 8 M18x1.5 on 275 mm ø	n° 8 M20x1.5 on 275 mm ø	n° 8 M20x1.5 on 275 mm ø	n° 10 M22x1.5 on 335 mm ø
最大转向角度 Max steering angle		40°	40°	45°	45°	55°	55°
最大扭矩 Peak torque	kNm	8.40	14.00	26.60	30.80	37.80	40.60
最大承载能力 Dynamic load capacity	kN	40	45	65	80	80	90
最大行使载荷 Static load capacity	kN	100	112	162	200	200	225

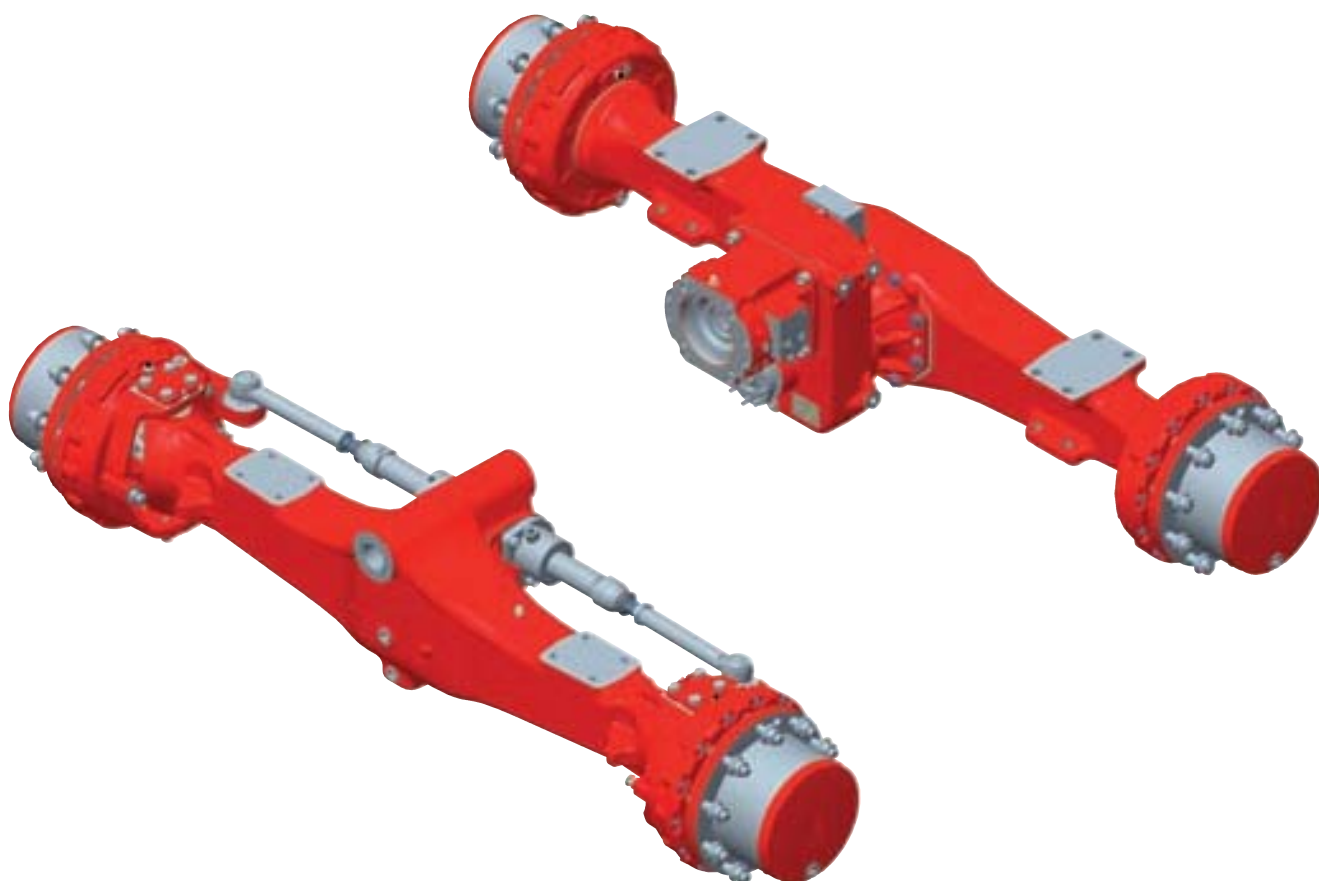
**所有型号可配备**  
ALL MODELS AVAILABLE WITH

车架连接 Frame MTG	刚性车架连接法兰/ 中心摆动 /顶置摆动 Rigid with pads / Center oscill. TRU / Offset oscill. ACP
行车制动 Service brakes	干式单盘/湿式多盘 Single dry / Wet immersed disc
停车制动 Parking brake	外置干式钳盘 Ext. single dry

# 轮式挖掘机传动系统

## Wheel Excavators drivelines

整机重量 Vehicle weight tons	前桥型号 Front axle model	后桥型号 Rear axle model	变速箱 Transmission
From 5 to 7	26.16 E	28.16 E	TB 172 TB 172-2
From 8 to 10	26.25 E	28.25 E	TB 172 TB 172-2
From 11 to 16	26.32 E	28.32 E	FLS 3.2 LS 3.2
From 17 to 19	26.44 E	28.44 E	FLS 3.2 / 4.2 LS 3.2 / 4.2
From 20 to 24	26.54 E	28.54 E	FLS 4.2 LS 4.2



型号 MODEL		26.16 E	26.25 E	26.32 E	26.44 E	26.54 E
宽度 Overall width	mm	1,954	2,074	2,241	2,241	2,421
轮辋安装法兰距离 Flange to flange distance	mm	1,720	1,832	1,920	1,920	2,100
轮辋安装尺寸 Wheel mounting dimension		n°8 M18x 1.5 on 275 mm Ø or n° 8 M20x 1.5 on 275 mm Ø	n°8 M18x 1.5 on 275 mm Ø or n° 8 M20x 1.5 on 275 mm Ø	n°10 M22x 1.5 on 335 mm Ø	n°10 M22x 1.5 on 335 mm Ø	n°10 M22x 1.5 on 335 mm Ø
最大转向角度 Max. steering angle		45°	45°	40°	40°	40°
最大扭矩 Peak torque	kNm	22	35	45	54	68
最大行使载荷 Dynamic load capacity	kN	70	85	95	120	150
最大承载能力 Static load capacity	kN	175	212.5	237.5	300	380

型号 MODEL		28.16 E	28.25 E	28.32 E	28.44 E	28.54 E
宽度 Overall width	mm	1,954	1,980	2,241	2,241	2,421
轮辋安装法兰距离 Flange to flange distance	mm	1,720	1,838	1,920	1,920	2,100
轮辋安装尺寸 Wheel mounting dimension		n° 8 M18x 1.5 on 275 mm Ø or n° 8 M20x 1.5 on 275 mm Ø	n° 8 M18x 1.5 on 275 mm Ø or n° 8 M20x 1.5 on 275 mm Ø	n° 10 M22x 1.5 on 335 mm Ø	n° 10 M22x 1.5 on 335 mm Ø	n° 10 M22x 1.5 on 335 mm Ø
最大扭矩 Peak torque	kNm	22	35	45	54	68
最大行使载荷 Dynamic load capacity	kN	80	85	95	120	150
最大承载能力 Static load capacity	kN	200	212.5	237.5	300	380

**所有型号可配备**  
ALL MODELS AVAILABLE WITH

车架连接 Frame MTG	后桥:刚性车架连接法兰/ 前桥: 顶置摆动 Rear: Rigid with pads / Front: Offset oscill. ACP
行车制动 Service brakes	湿式多盘 Wet immersed disc acting "on wheel" for WE axles

**备注**

卡拉罗提供传动系统的同时,可以提供挖掘机底盘全系列回转减速机.

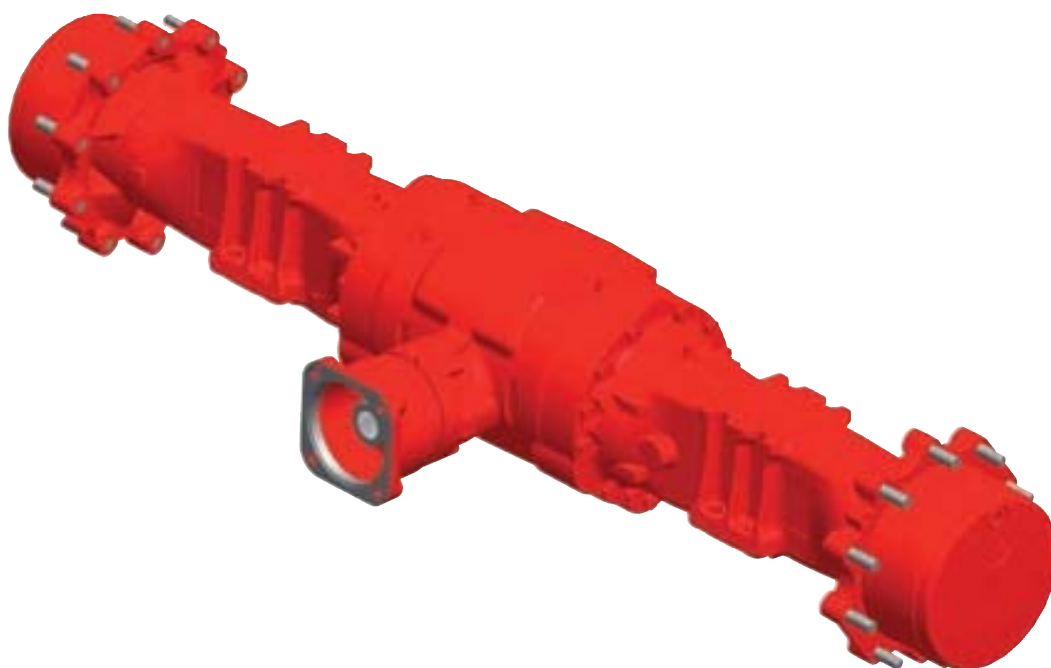
**Note**

In addition to the driveline Carraro also offers a full range of slew drives for rotation of the excavator's upper carriage.

# 压路机传动系统

## Soil compactor axles

整机重量 Vehicle weight tons	后桥型号 Rear axle model	可选变速箱 Gearbox option
From 1.5 to 4	28.16 R	TB172液压单速 TB172 Hydrostatic single speed
From 5 to 8	28.25 R	TB172液压单速 TB172 Hydrostatic single speed
From 9 to 11	28.32 R	TB172液压单速 TB172 Hydrostatic single speed
From 12 to 15	28.48 R	TB172液压单速 输入行星驱动 TB172 Hydrostatic single speed Input planetary drive
From 16 to 19	28.60 R	TB172液压单速 输入行星驱动 TB172 Hydrostatic single speed Input planetary drive
From 20 to 25	28.80 R	TB172液压单速 输入行星驱动 TB172 Hydrostatic single speed Input planetary drive



型号 MODEL		28.16 R	28.25 R	28.32 R
宽度 Overall width	mm	1,260	1,512	1,860
轮辋安装法兰距离 Flange to flange distance	mm	1,100	1,270	1,654
轮辋安装尺寸 Wheel mounting dimension		n° 8 M18 x 1.5 on 275 mm ø	n° 8 M18 x 1.5 on 275 mm ø	n° 10 M22 x 1.5 on 335 mm ø
总的减速比 Total reduction		From 30 to 110	From 40 to 110	From 40 to 110
最大扭矩 Peak torque	kNm	22.5	35	45
最大行使载荷 Dynamic load capacity	kN	50	80	90
最大承载能力 Static load capacity	kN	125	200	225

型号 MODEL		28.48 R	28.60 R	28.80 R
宽度 Overall width	mm	1,988	1,928	2,040
轮辋安装法兰距离 Flange to flange distance	mm	1,700	1,640	1,740
轮辋安装尺寸 Wheel mounting dimension		n° 10 M20 x 1.5 on 335 mm ø	n° 10 M20 x 1.5 on 335 mm ø	n° 12 M22 x 1.5 on 425 mm ø
总的减速比 Total reduction		From 43 to 110	From 43 to 110	From 43 to 110
最大扭矩 Peak torque	kNm	67.2	84	112
最大行使载荷 Dynamic load capacity	kN	90	110	120
最大承载能力 Static load capacity	kN	225	275	300

**备注**

卡拉罗可为压路机前辊提供全系列液力减速机

**Note**

For soil compactors Carraro also offers a full range of hydrostatic drives for the front drum.

# The Power Transmission Excellence is our Passion

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安装图纸可以根据客户的要求绘制，尺寸和技术数据会随研发深入而有所更改。

Project related installation drawings can be made available on request as dimensions and technical data are subject to change due to continuous development.

**carrarodrivetech.com**

