



GR1803

MOTOR GRADER

平地机

The GR1803 motor grader is mainly used for ground leveling, ditching, slope scraping, bulldozing, scarification, snow removal for large areas such as highway, airports, farmlands etc. It is the necessary construction machinery for national defense construction, mine construction, urban and rural road construction and water conservancy construction, farmland improvement and so on.

GR1803平地机主要用于公路、机场、农田等大面积的地面平整和挖沟、刮坡、推土、松土、除雪等作业。是国防工程、矿山建设、城乡道路等建筑施工和水利建设、农田改良等所必须的工程机械。

Performance Characteristics / 性能特点

- Energy saving and noise reduction: adopt low speed engine transmission line, low fuel consumption and energy saving and environmental protection; The transmission system is equipped with low speed ratio, and the average fuel consumption is reduced by about 8%. Three levels of engine, cab and seat vibration reduction; The cab is supported by six points; Deceleration of engine, cooling fan with large diameter, sound absorption sponge inside the hood, good sealing of the cab reduces noise of the whole machine.
- Strong power: Shangchai efficient China stage III engine and hydraulic torque converter, the optimal torque converter achieves the best matching of torque converter and engine, reducing the start time, increase the work of torque output at low speed, strong and powerful. The optional herringbone tread tires, the adhesion can be increased by 10% in loosening soil and leveling, further enhance the power output.
- Rotation with load: improve the pressure of hydraulic system system, the rotary force of the blade, the high frequency quenching treatment improves the wear resistance and life span, and realize the rotation operation.
- Efficient operation: improves the displacement of hydraulic pump and hydraulic motor, increase the oil cylinder speed by 20%, realizes the industry leading work efficiency, the optimized blade shape can turn and remove the soil quickly and efficiently, and realize optimal load distribution and the minimum material accumulation within the rotary disc area.
- 节能降噪：采用低速发动机传动路线，额定点的比油耗低，节能环保；传动系统进行低速比配置，平均油耗降低8%左右；发动机、驾驶室、座椅三级减振；驾驶室六点组合支撑；发动机降频减速、风扇大直径低速比、机罩内贴吸音海绵、驾驶室良好密封，整机噪音降低。
- 动力强劲：采用上柴高效国III变功率发动机，匹配液力变矩器，选用最优的变矩器循环圆直径，实现变矩器与发动机的最佳匹配，减少整车启动提速时间，加大低速工作时的扭矩输出，强劲有力。选配人字形花纹轮胎，在松土、平整等工况整车附着着力可提升10%左右，进一步提升动力输出。
- 带载回转：提高液压系统系统压力，铲刀回转力大大提高，齿圈高频淬火处理，耐磨性和寿命提高，实现带载回转作业。
- 高效作业：提高了液压泵和液压马达的排量，实现油缸速度提高20%，作业效率行业领先，对铲刀弧形进行优化，能够快速高效地翻土和排土，实现最佳的负载分配和回转盘区域内最小的物料堆积。

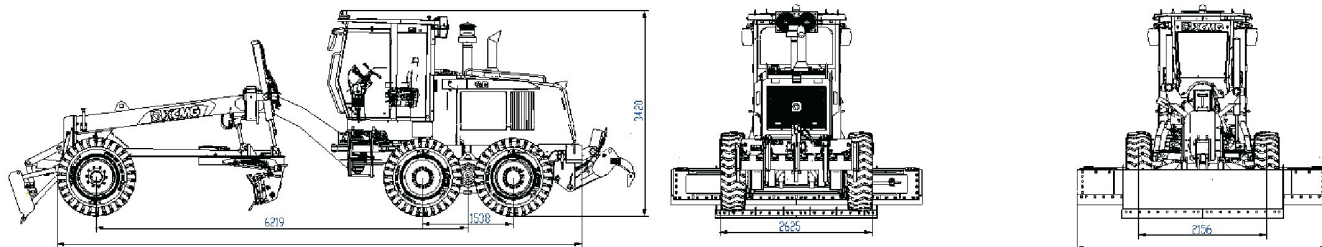
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Main Dimensions

主要尺寸



Main Specifications

主要技术参数

	Item		项目		单位 Unit	GR1803	
Basic parameters 基本参数	Engine model		发动机型号			SC7H190.1G3	
	Rated power/speed		额定功率/转速		kW/rpm	140/2000	
	Overall dimension (standard)		整机外型尺寸（标配）		mm	8900×2625×3420	
	Total weight (standard)		整机重量（标配）		kg	15400	
	Tire specification		轮胎规格			17.5-25	
	Ground clearance (front axle)		离地间隙（前桥）		mm	430	
	Tread		轮距		mm	2156	
	Space of front and rear axles		前后桥距		mm	6219	
Space of middle and rear wheels		中后轮距		mm	1538		
Performance parameters 性能参数	Forward velocity		前进速度		km/h	5、8、11、19、23、38	
	Reverse speed		后退速度		km/h	5、11、23	
	Tractive effort f=0.75		牵引力f=0.75		kN	≥79	
	Maximum gradeability		最大爬坡能力		%	≥25	
	Inflation pressure of tires		轮胎充气压力		kPa	260	
	Working system pressure		工作系统压力		MPa	20	
	Transmission pressure		变速箱压力		Mpa	1.3—1.8	
Working parameters 工作参数	Maximum steering angle of front wheels		前轮最大转向角		°	±48	
	Maximum inclination angle of front wheels		前轮最大倾斜角		°	±17	
	Maximum swing angle of front axle		前桥最大摆动角		°	±15	
	Maximum swing angle of balance box		平衡箱最大摆动角		°	Front 15, rear 15	
	Maximum steering angle of frame		车架最大转向角		°	±27	
	Minimum turning radius		最小转弯半径		m	7.3	
	Blade	Maximum lifting height		铲刀	最大提升高度	mm	400
		Maximum shoveling depth			最大铲土深度	mm	500
		Maximum lateral inclination angle			最大侧倾角度	°	90
		Cutting angle			切削角	°	28—70
Slewing angle		回转角	°		360		
Length × chord height		长度x弦高	mm		3660×610		
Oil filling amount 加注油量	Coolant		冷却液		L	50	
	Fuel tank		燃油箱		L	280	
	Engine		发动机		L	24	
	Transmission		变速箱		L	38	
	Balance box		平衡箱		L	46	
	Drive axle		驱动桥		L	28	
	Hydraulic oil		液压油		L	110	