

QY100K领先型—百吨级产品的新纪元

QY100K Leading Class-New Era for Hundred-Ton Truck Cranes

今天，采用PRO/E设计手段，经过多种可靠性模拟实验，在各种精密大型设备锻造下，QY100K立在国内百吨级产品的最高端。

- **零差错制造：**一直以来，制造系统无法精确执行技术人员的设计思想，需要经历反复的修改和调整。如今，徐重的100K在投产之前，运用电脑模拟预装配技术，精确到每一个制造工艺流程，确保了产品更高效能的表现。
- **高智能：**PLC计算机集成控制系统——所有起重机的重要电子元件的电子信号经过计算机集中处理，使起重机的所有操作更加简单方便，全面提高起重机的作业安全性、可靠性和作业效率。
- **高节能：**恒功率变量系统——与集成式控制器相结合，可根据负载变化自动调整系统输出流量和压力，速度控制精确灵敏。
- **持久：**强劲的工程机械专用发动机——上车配置进口沃尔沃发动机，确保产品在各种载荷状态均匀有力，可长时间、连续、平稳作业；下车配置进口康明斯发动机，动力持久。
- **高效：**六桥越野起重机底盘——三桥驱动，驱动力强；三桥转向，转向灵活，通过性好，能迅速到达吊装位置。
- **高性能：**椭圆形截面的五节主吊臂——截面优化，吊臂重量减轻，起重能力得以完全释放。
- **更便捷：**大弧面视野整体式操纵室——可向上调节20°，自装卸平衡重——灵活组合平衡重，满足各种工况要求，可选装置——自动润滑装置，副起重臂，臂端单滑轮，防紫外线玻璃，操纵室收录机等。



电 脑 模 拟 预 装 配



crane of 100' ton.
 Today, QY100K Truck Crane, with Pro/E design, produced by precise machines and equipment and through simulation tests for reliability, ranks the first in truck cranes of 100t class.

- **Non-faulty manufacture:** using pre-assembly technique of computer simulation for each process ensures the product quality.
- **Good intelligence:** PLC integrated control system---all electronic signals of key electronic components are processed by computer therefore make crane operation easier and more convenient, working safety, reliability and efficiency are improved greatly.
- **Cost energy:** constant power and variable displacement system---combined with integrated controller, automatically adjust system output and pressure based on load variation, precise and smart control of speed.
- **Durability:** powerful construction machinery engines---imported Volvo engine for crane superstructure ensures long-time smooth operation, imported Cummins engine for crane carrier provides powerful and durable drive.
- **High efficiency:** 6-axle off-road crane chassis---3 axles for drive, 3-axes for steering, powerful drive, easy steering, good pass-ability and rapid access to working position.
- **Excellent performance:** 5-section ovoid profile boom---optimized cross-section minimizes boom weight and maximizes crane lifting capacity.
- **More convenience:** all-round and full vision operator's cab---can be tilted backwards 20°; self-assembly of counter weight---various combined counter weight to meet various working requirements. Optional equipments---centralized lubrication unit, jib, single sheave on boom tip, anti-ultraviolet ray glass, radio-cassette recorder, etc.

QY100K TRUCK CRANE

Truck Crane QY100K

www.wme.cn/TruckCrane/

多平衡重组合-全面增强中长臂、大幅度起重能力

IMPROVES Mid-extended Boom Strength and Increases Lifting Capacity

COMBINED COUNTERWEIGHT



QY100K



转台中位检测装置
Turntable mid-position detector

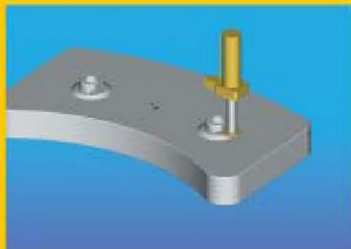
平衡重悬挂油缸
Suspended cylinder for counterweight

平衡重定位装置
Positioning device for counterweight

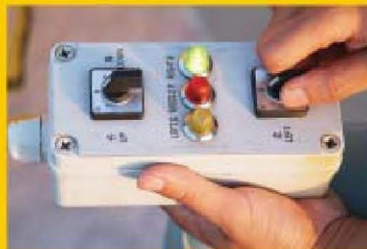
平衡重可遥控装卸 Remote control of counterweight



平衡重尾部为弧形结构, 尽可能缩小了回转作业空间
Curved counterweight tail reduces swing radius



平衡重自装卸
Self-assembly of counterweight



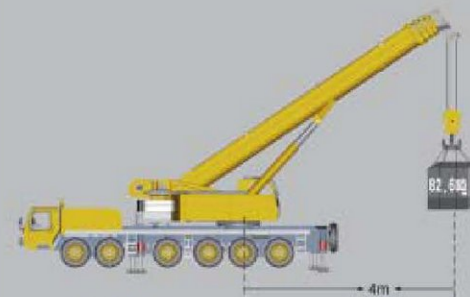
平衡重遥控器
counterweight remote controller



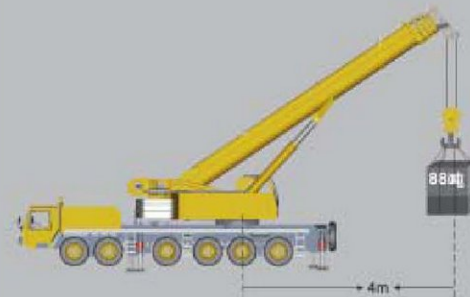
不挂平衡重最大力矩: 2734kN.m
Max. load moment without counterweight



8.3吨平衡重最大力矩: 3058kN.m
Max. load moment with 8.3t counterweight



14.3吨平衡重最大力矩: 3238kN.m
Max. load moment with 14.3t counterweight



19.2吨平衡重最大力矩: 3450kN.m
Max. load moment with 19.2t counterweight



QY100K TRUCK CRANE

Truck Crane QY100K

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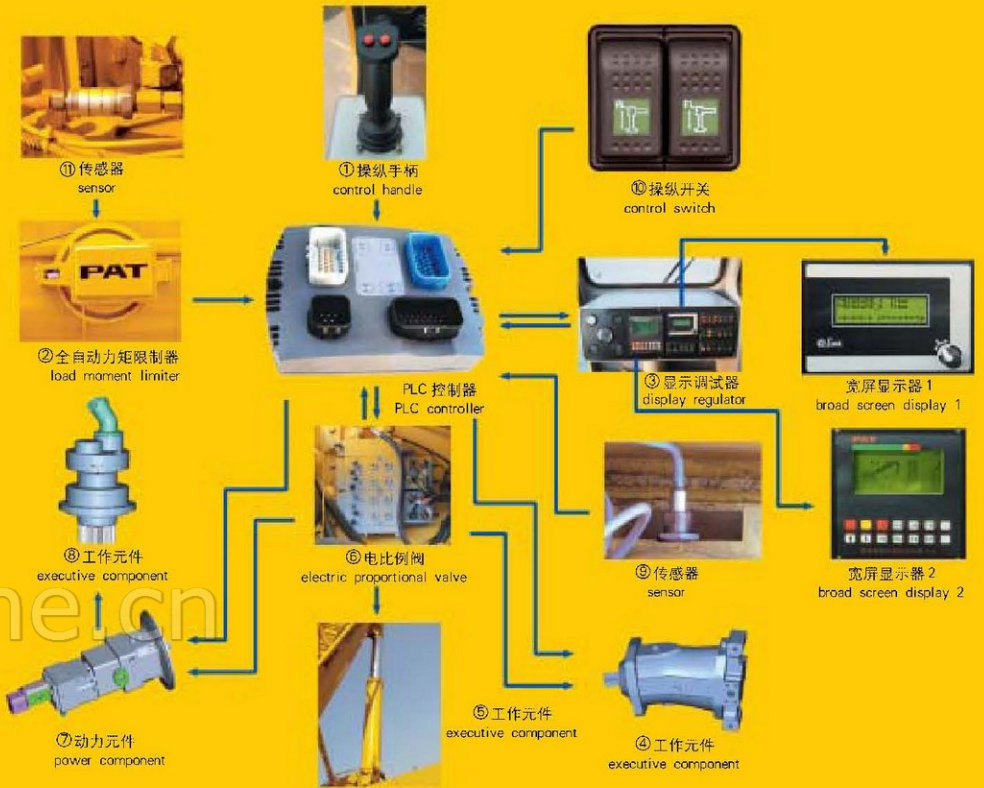
PLC Computer Integrated Control System:

Lifting operation part is controlled by PLC computer integrated controller for construction machinery. Control signals and operating performance chart can be set and adjusted with digital data. The control system, combined with variable-displacement hydraulic system, can automatically and accurately adjust its output and pressure based on load variation, therefore makes crane control and operation smooth and precise.

- ◆ free of maintenance
- ◆ imported electronic components
- ◆ failure diagnostic function
- ◆ real-time monitoring function
- ◆ convenient and accurate operating performance



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PLC计算机集成控制系统:

起重作业部分采用工程机械专用PLC可编程集成式控制器, 控制信号和操纵特性曲线可实现数字化设定和调整。该控制器与变量液压系统相结合, 能够更精准地根据负载变化自动调整系统输出流量和压力, 操纵精确平稳。

- ◆免维护
- ◆进口电子元件
- ◆实时监测功能
- ◆故障诊断功能
- ◆方便准确的设定操纵特性



转台对中装置
turntable aligning device



卡套接头
ferrule-type pipe joint

液压系统 Hydraulic System

- ◆进口卡套式接头、零泄露、防污染
- ◆高效的液压油冷却系统
- ◆节能高效的变量起升液压系统 (专利号: 01237657.4)
- ◆防冲击自动找正的回转液压系统 (专利号: 03219267.3)
- ◆性能卓越、运动可靠的进口泵、马达、阀类、密封等执行元件
- ◆高度集成的模块化阀组, 管路简单, 液阻小 (专利号: 012044458.8)
- ◆Imported ferrule-type pipe joints, free of leakage and antipollution
- ◆Effective hydraulic oil cooling system
- ◆Variable hydraulic system of cost energy and high efficiency for hoist (Patent No.: 01237657.4)
- ◆Hydraulic system of shockproof self-alignment for swing (Patent No.: 03219267.3)
- ◆Imported pump, motor, valves and sealing with excellent performance and reliability
- ◆Integrated modular valve block with simple pipeline and less hydraulic resistance (Patent No.: 012044458.8)

QY100K

卓越部件综合展示

PARTS WITH HIGH QUALITY AND EXCELLENT PERFORMANCE

QY100K

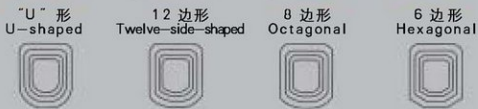
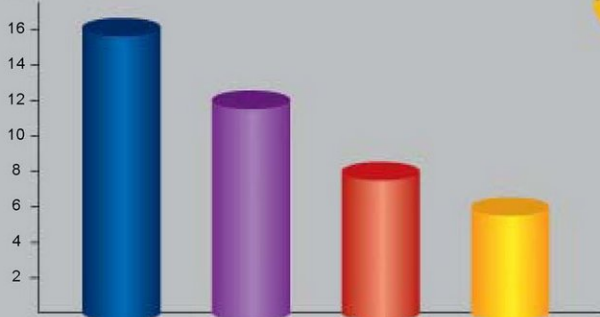
多边形高性能吊臂

Polygonal profile boom with excellent performance

◆ 截面优化显著地提高起重性能

Optimized cross-section remarkably improves lifting capacity

性能提高率
performance improved rate (%)



不同截面形状的起重性能对比

Lifting performance comparison among various boom profiles



吊臂对中装置
Boom aligning device



U型臂滑块
Slide pads for U-shaped boom

椭圆形截面的五节主吊臂

- ◆ QY100K 拥有国际最先进的椭圆形截面吊臂
- ◆ 吊臂选用进口超碳钢
- ◆ 特殊的滑块和对中装置, 使吊臂伸缩平稳, 对中可靠
- ◆ 截面优化显著地提高起重性能

5 Boom Sections with Ovoid Boom Profile

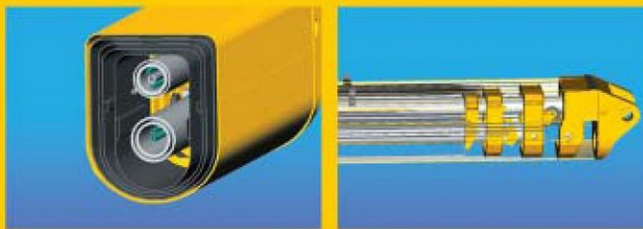
- ◆ Most advanced ovoid boom profile
- ◆ Imported high strength steel
- ◆ Special slide pads and aligning devices make boom telescope smoothly and align accurately
- ◆ Optimized cross-section remarkably improves lifting capacity

起重臂伸缩系统

- ◆ 双缸加绳排伸缩方式, 臂长从12.8米到48米, 仅需160秒
- ◆ 多芯管伸缩油缸, 双缸内部沟通, 免除了软管卷筒
- ◆ 每节伸缩臂可从侧面得到充分的润滑
- ◆ 进口绳排和轴承

Boom Telescoping System

- ◆ Double-cylinder plus wire ropes for telescoping, boom extension from 12.8m to 48m only in 160 seconds
- ◆ Telescoping cylinder with multi-core pipes, double cylinder of internal connection free of hose reel
- ◆ Sufficient side lubrication for each boom section
- ◆ Imported wire ropes and bearings



多芯管伸缩油缸
Telescoping cylinder with multi-core pipes

每节伸缩臂可从侧面得到充分的润滑
Sufficient side lubrication for each boom section



起升机构
winches

起升机构

- ◆ 选用臂端滑轮时, 重物起吊40米只需30秒
- ◆ 采用常闭式行星减速机
- ◆ 进口防旋转起吊钢丝绳
- ◆ 0-80° 变幅时间只需75秒
- ◆ 每分钟2圈的回转速度
- ◆ 双独立起升机构



PAT 收线器
PAT cord reel

Hoist

- ◆ With single sheave on boom tip, lift load up to 40m only in 30 seconds.
- ◆ Constant closed planetary gear reducer.
- ◆ Imported anti-rotation winch ropes.
- ◆ Elevating from 0° to 80° only in 75 seconds.
- ◆ Swing speed 2 rpm.
- ◆ Two independent winches.



QY100K TRUCK CRANE

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上车沃尔沃发动机
Volvo engine on crane superstructure



下车康明斯发动机
Cummins engine on crane chassis

动力系统

- ◆ 上车配备输出功率为174kW的沃尔沃工程机械专用全新涡轮增压柴油机, 耗油量小、扭矩大
- ◆ 下车配备输出功率为324kW的康明斯欧 II 电喷最新型发动机或306kW的康明斯欧 III 发动机
- ◆ 通过程序监控的柴富变速箱
- ◆ 传动系统强劲可靠
- Power**
- ◆ Equipped with Volvo turbocharged diesel engine on crane superstructure, output 174kW, less fuel consumption and powerful torque.
- ◆ Powerful Cummins engine on crane chassis, electronic injection, output 324kW, Euro II (or output 306kW, Euro III)
- ◆ ZF transmission monitored by program.
- ◆ Powerful drive train.



支腿操纵

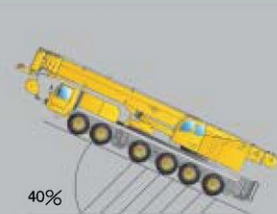
- ◆ 电控操纵, 并设有油门增速按钮
- ◆ 全伸支腿时, 无需第5支腿, 可实现360°全回转作业
- ◆ 双侧均配有夜视水平仪 (专利号: 03219322.X)
- ◆ 各支腿可独立操作, 亦可同时操作
- ◆ 双H型支腿, 水平支腿最大横向跨距7.6米, 纵向跨距7.56米

Operating Outriggers

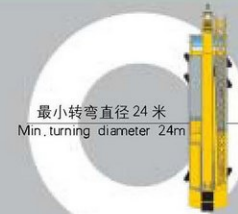
- ◆ Electric control with acceleration button.
- ◆ Without 5th outrigger, 360° swing on fully-extended outriggers.
- ◆ Night visual level gauge on both sides (Patent No.: 03219322.X)
- ◆ Each outrigger operated either independently or simultaneously.
- ◆ Double H-shaped outrigger with max. span 7.6m (transverse) and 7.56m (longitudinal)



可实现360°全回转作业
Operation of 360° full swing



40%



最小转弯直径24米
Min. turning diameter 24m

底盘转向

- ◆ 三桥驱动, 三桥转向
- ◆ 最小转弯直径24米
- ◆ 最大爬坡度40%

Steering

- ◆ 3-axle drive and 3-axle steering
- ◆ Min. turning diameter 24m
- ◆ Max. grade-ability 40%

人性化的体贴设计

ERGONOMIC AND CONSIDERATE DESIGN

QY100K

舒适的工程机械专用驾驶室

- ◆设计合理的内装饰,良好的隔音效果
- ◆可调式驾驶员减震座椅
- ◆可调式方向盘
- ◆电控自动升降玻璃
- ◆可自动除霜
- ◆内设 CD 机

Comfortable driver's cab for construction machinery

- ◆Reasonable internal decoration, good isolation
- ◆Adjustable damping seat for driver
- ◆Adjustable steering wheel
- ◆Electrical side window glass lifter
- ◆Automatic defrosting
- ◆CD player

新型的操纵室

- ◆流线型整体复合材料壳体
- ◆大圆弧整体式前视窗,消除视觉死角
- ◆可调式操作员座椅
- ◆先导手柄轻轻一推,各项作业轻松完成

New Operator's Cabin

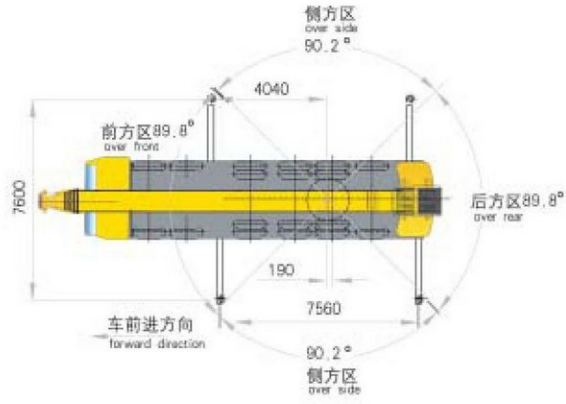
- ◆Integrated streamline body made of composite
- ◆Integrated front window and roof window, free of dead space of view
- ◆Adjustable seat for operator
- ◆Complete operation by gentle touch of the pilot handle



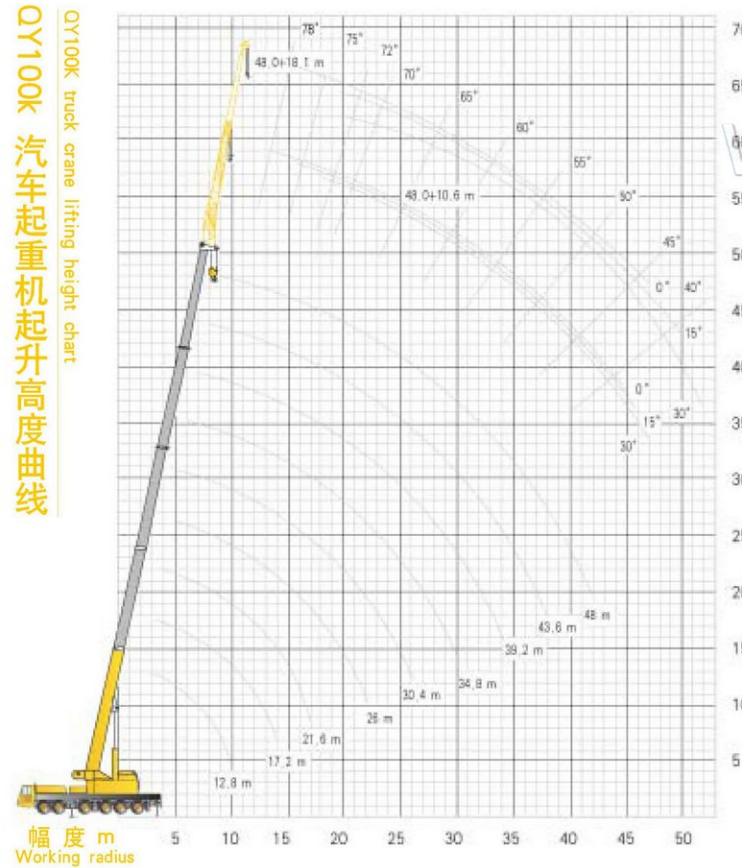
ERGONOMICAL AND CAREFULL DESIGN

QY100K 汽车起重机作业区域划分

QY100K Truck Crane Working Area



QY100K 汽车起重机起升高度曲线



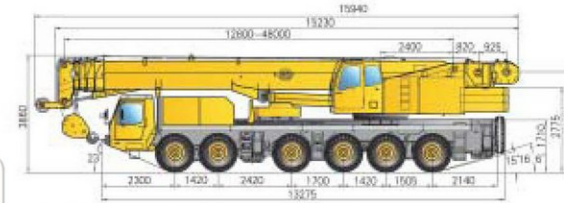
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起重机行驶状态主要技术参数表

Main Technical Data in Travel State

类别 Category	项目 Item	单位 Unit	参数 Parameters	
尺寸参数 Outline Dimensions	整机(长×宽×高) Overall (Length × Width × Height)	mm	15230 × 3000 × 3860	
	轴距 Wheel space	mm	1420+2420+1700+1420+1506	
重量 参数 Weight	行驶状态总质量 Dead weight in travel state	kg	58000	
	轴荷 Axle load	1轴 1st axle	kg	7500
		2轴 2nd axle	kg	7500
		3轴 3rd axle	kg	10000
		4轴 4th axle	kg	12500
		5轴 5th axle	kg	12500
		6轴 6th axle	kg	8000
动力 参数 Power	发动机额定功率 Engine rated output	kw/(r/min)	324/1800 (306/1900)	
	发动机额定扭矩 Engine rated torque	N.m/(r/min)	2100/1200 (2010/1200)	
	发动机额定转速 Engine rated speed	r/min	1900 (1900)	
	最小离地间隙 Min. ground clearance	mm	310	
行驶 参数 Performance	接近角 Approach angle	°	23	
	离去角 Departure angle	°	15	
	制动距离(车速为 30km/h) Braking distance(at 30km/h)	m	≤ 10	
	最大爬坡度 Max. grade ability	%	40	
	最小转弯直径 Min. turning diameter	m	24	
	百公里油耗 Fuel consumption of 100km	L	70	

表 1 table 1



起重机作业状态主要技术参数表

Main Technical Data for Lifting Operation

类别 Category	项目 Item	单位 Unit	参数 Parameters	
主要 性能 参数 Lifting performance	最大额定总起重量 Max. total rated lifting capacity	t	100	
	最小额定幅度 Min. rated working radius	m	3	
	转台尾部回转半径 Turning radius at swing table tail	平衡重处 At counterweight	mm	4200
		副卷处 At auxiliary winch	mm	4590
	最大起重力矩 Max. load	基本臂 Base boom	kN.m	3450(4m × 88t)
		最长主臂 Full-extend boom	kN.m	1670(24m × 7.1t)
		最长主臂+副臂 Full-extend boom+Jib	kN.m	1127(19.2m × 6t)
	支腿距离(全伸) Outrigger span	纵向 Longitudinal distance	m	7.56
		横向 Lateral distance	m	7.6
	起升高度 Lifting height	基本臂 Base boom	m	12.8
最长主臂 Full-extend boom		m	47.9	
最长主臂+副臂 Full-extend boom+Jib		m	65.9	
起重臂长度 Boom length	基本臂 Base boom	m	12.8	
	最长主臂 Full-extend boom	m	48	
	最长主臂+副臂 Full-extend boom+Jib	m	48+18.1	
工作 速度 参数 Working speed	副臂安装角 Jib offset	°	0, 15, 30	
	起重臂变幅时间 Boom elevating time	s	75	
	起重臂伸缩时间 Boom telescoping time	起臂 Boom raising	s	160
		全伸 Full-extending	s	2
	最大回转速度 Max. swing speed	r/min	2	
	支腿伸缩时间 Outrigger extending and retracting time	水平支腿 同时伸/缩 Outrigger beam Extending/Retracting	s	25/15
		垂直支腿 同时伸/缩 Outrigger jack Extending/Retracting	s	45/25
起升速度(单绳, 第四层) Hoist speed(single line at 4th layer)	主起升机构 Main winch	m/min	105	
	副起升机构 Aux. winch	m/min	104	

表 2 table 2

