



Precision Agricultural & Crop Spraying Drone

About Oriful

Founded in 2016, Oriful is one of leading professional UAV manufacturers and industrial grade agriculture drone technology and solutions developer in the world.

We have been dedicated to providing farmers worldwide affordable highly reliable and efficient smart agricultural drones and robotics to make farming much easier and successful. We are one of those few drones manufactures focusing on latest state-of-the art agricultural drone technology that can bring farmers most reliable easy to use agricultural drones for precision agriculture. Our agricultural drones feature the following technical advantages.

- 1) Support flying route planning setting, A-B route operation, automatic spraying
- 2) Automatically resume from last breakpoint exactly
- 3) Low voltage alarm makes flying safer
- 4) GPS hovering, easy operation
- 5) Altitude detection, terrain following and automatic obstacle avoidance
- 6) Automatic return when low battery capacity and low pesticide volume are detected
- 7) One button take-off and landing, safer and easy operation
- 8) Android/Windows ground station, voice broadcasting
- 9) Vibration, lost of connection and pesticide volume cut protection
- 10) Flying height auto control radar, support altitude and flying layout setting
- 11) IP67 rating waterproof and dustproof
- 12) Foldable drone arms
- 13) Night vision FPV camera
- 14) Support D-RTK (Real-time kinematic)

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5L 4 Axis Agricultural drone



Model	M505
Product Name	5L 4 Axis Agriculture drone for pests and disease monitoring
Diagonal Wheelbase	1200 mm
Total Weight	11.4kg (battery and payload included)
Aircraft Weight	11.4 KG (battery and payload included)
Takeoff Weight(Max.)	11.4kg (full load)
Payload	1.0kg
Flight Time	Empty load:≥ 72Min ; Full load≥ 65Min
Flight Speed	4 -14 Meter/S
Flight Radius	10,000 Meters
Picture transmission distance	Up to 5KM distance, wireless transmission, 1080P
Flight Height	100 -1000 KM
Flight Control	XAG
Camera	Optional
Wind Resistance	6 Levels
Propulsion System	100 Kv Motor
Battery Capacity	Flight battery :16,000 mAh (12S)*2; Remote control battery : 10,000 mAh *1
Working Voltage	44-60.9V (12S)
Charging Time	12-24 minutes
Recharge Cycles	300-500 times
Operating Temperature	10~50℃
Dimension	940*940*520mm(unfolded,arms excluded)

10L 4 Axis Agricultural drone



A100Z



A100

Model	A100Z	A100
Product Name	10 L 4 Axis Agriculture drone	10 L 4 Axis Agriculture drone
Diagonal Wheelbase	1000 mm	1400 mm
Total Weight	11.7kg (1.7 KG battery included)	12.6kg (1.6 KG battery included)
Aircraft Weight	10.0 KG (battery excluded)	11.0 KG (battery excluded)
Battery Weight	1.7 KG	1.6 KG
Takeoff Weight(Max.)	21.0kg (full load)	21.0 kg (full load)
Payload	10.0kg	10.0kg
Flight Time	Empty load: 20~25Min ; Full load \geq 10Min	Empty load: 20~25Min ; Full load \geq 12Min
Flight Speed	2 -8 Meter/S	4 -5 Meter/S
Flight Radius	1000 Meters	1000 Meters
Flight Height	1.5 -5 Meters	2 -8 Meters
Flight Control	XAG	Jiyi K++ V2/V9 AG
Propulsion System		
Motor	100 Kv Motor	100 Kv Motor
Battery Capacity	Flight battery :12,000 mAh (6S)*2; Remote control battery : 10,000 mAh *1	Flight battery :16,000 mAh (12S)*1; Remote control battery : 10,000 mAh *1
Working Voltage	25.2V (6S)	44-60.9V (12S)
Charging Time	12-24 minutes	12-24 minutes
Recharge Cycles	300-500 times	300-500 times
Spray System		
Liquid Tank Capacity/Payload	10 L	10 L
Configuration	Tank *1, Pump*2, Flowmeter*1, Nozzels *4	Tank *1, Pump*2, Flowmeter*1, Nozzels *4
Spraying Mode	Pressure Spray	Pressure Spray
Water Pump Pressure	0.35 mPa	1 mPa
Number of Nozzle	4 pcs high pressure spray misting nozzles	4 pcs high pressure spray misting nozzles
Spray Width	3~4M	3~4 M
Max Spraying Flow Rate	5 L/min	5 L/min
Spray Efficiency	5 Ha/Hour	5 Ha/Hour
Operating Temperature	10~50℃	10~50℃
Dimension	1300*1300*650mm (unfolded,arms excluded)	1100*1100*600mm (unfolded,arms excluded), 620*620*600mm(folded)

16L 4 Axis/6 Axis Agricultural drone



A160



A160S



A160Z

Model	A160	A160S	A160Z
Product Name	16 L 4 Axis Agriculture drone	16 L 6 Axis Agriculture drone	16 L 6 Axis Agriculture drone
Diagonal Wheelbase	1600 mm	1600 mm	1620 mm
Total Weight	18.1kg (6.1 KG battery included)	19.1kg (6.1 KG battery included)	/
Aircraft Weight	12.0 KG (battery excluded)	13.0 KG (battery excluded)	16.8 KG (battery excluded)
Battery Weight	6.1 KG	6.1 KG	4.8 KG
Takeoff Weight(Max.)	38.0kg (full load)	39.0kg (full load)	38.8 kg (full load)
Payload	16.0kg	16.0kg	16.0kg
Flight Time	Empty load: 20~25Min ; Full load: ≥12Min	Empty load: 20~25Min ; Full load: ≥10Min	Empty load: 20~25Min ; Full load: 10~15Min
Flight Speed	4 -5 Meter/S	4 -5 Meter/S	4 -5 Meter/S
Flight Radius	1000 Meters	1000 Meters	
Flight Height	2 -8 Meters	2 -8 Meters	
Flight Control	XAG	XAG	Jiyi K++ V2/V9 AG
Propulsion System			
Motor	100 Kv Motor	100 Kv Motor	100 Kv Motor
Battery Capacity	Flight battery :22,000 mAh (12S)*1; Remote control battery : 10,000 mAh *1	Flight battery :16,000 mAh (12S)*1; Remote control battery : 10,000 mAh *1	Flight battery :16,000 mAh (12S)*1; Remote control battery : 10,000 mAh *1
Working Voltage	44-60.9V (12S)	44-60.9V (12S)	44-60.9V (12S)
Charging Time	12-24 minutes	12-24 minutes	12-24 minutes
Recharge Cycles	300-500 times	300-500 times	300-500 times
Spray System			
Liquid Tank Capacity/Payload	16 L	16 L	16 L
Configuration	Tank *1, Pump*2, Flowmeter*1, Nozzels *4	Tank *1, Pump*2, Flowmeter*1, Nozzels *4	Tank *1, Pump*1, Flowmeter*1, Nozzels *6
Spraying Mode	Pressure Spray	Pressure Spray	Pressure Spray
Water Pump Pressure	1 mPa	1 mPa	1 mPa
Number of Nozzle	4 pcs high pressure spray misting nozzles	4 pcs high pressure spray misting nozzles	6 pcs high pressure spray misting nozzles
Spray Width	3~4M	3~4M	5~8 M
Max Spraying Flow Rate	5 L/min	5 L/min	5 L/min
Spray Efficiency	6~7 Ha/Hour	6~7 Ha/Hour	6~7 Ha/Hour
Operating Temperature	10~50 °C	10~50 °C	10~50 °C
Dimension	1100*1100*600mm(unfolded, arms excluded) 620*620*600mm(folded)	1500*1720*630mm(unfolded, arms excluded), 1100*1170*630mm(folded)	1850*1620*670mm(unfolded, arms excluded) 1020*920*670mm(folded)

20L 4 Axis/6 Axis Agricultural drone



A200Z



A200

Model	A200Z	A200
Product Name	20 L 4 Axis Agriculture drone	20 L 6 Axis Agriculture drone
Diagonal Wheelbase	1810 mm	2940 mm
Total Weight	TBD	25.0kg (6.5 KG battery included)
Aircraft Weight	18.0 KG (battery excluded)	18.5 KG (battery excluded)
Battery Weight	7.2 KG/Pcs	6.5 KG/Pcs
Takeoff Weight(Max.)	47.0kg (full load)	45.0 kg (full load)
Payload	20.0kg	20.0kg
Flight Time	Empty load: 20~25Min ; Full load: 8-14Min	Empty load: 20~25Min ; Full load: 15Min
Flight Speed	4 -5 Meter/S	4 -8 Meter/S
Flight Radius	1000 Meters	1000 Meters
Flight Height	2 -8 Meters	2 -8 Meters
Flight Control	Jiyi K++ V2/V9 AG	Dji
Propulsion System		
Motor	100 Kv Motor	100 Kv Motor
Battery Capacity	Flight battery :22,000 mAh (14S)*1; Remote control battery : 10,000 mAh *1	Flight battery :20,000 mAh (14S)*4; Remote control battery : 10,000 mAh *1
Working Voltage	44-60.9V (14S)	51.8V (14S)
Charging Time	12-24 minutes	12-24 minutes
Recharge Cycles	300-500 times	300-500 times
Spray System		
Liquid Tank Capacity/Payload	20 L	20 L
Configuration	Tank *1, Pump*1, Flowmeter*1, Nozzels *6	Tank *1, Pump*1, Flowmeter*1, Nozzels *10
Spraying Mode	Pressure Spray/Centrifugal Spray (Centrifugal Pump)	Pressure Spray
Water Pump Pressure	1 mPa	1 mPa
Number of Nozzle	4 pcs high pressure spray misting nozzles, 2 pcs brushless centrifugal nozzles	10 pcs high pressure spray misting nozzles ,
Spray Width	5~8M	8~12 M
Max Spraying Flow Rate	5 L/min	5 L/min
Spray Efficiency	6 Ha/Hour	11~12 Ha/Hour
Operating Temperature	10~50 °C	10~50 °C
Dimension	1385*1385*763mm(unfolded,arms excluded), 770*790*775mm(folded),	3700*2100*520mm(unfolded,arms excluded),

22L/32L 4 Axis/6 Axis Agricultural drone



A200



A320

Model	A220	A320
Product Name	22 L 4 Axis Agriculture drone	32 L 6 Axis Agriculture drone
Diagonal Wheelbase	1730 mm	1996 mm
Total Weight	29.2kg (9.55 KG battery included)	30.3kg (8.5 KG battery included)
Aircraft Weight	19.65 KG (battery excluded)	21.8KG (battery excluded)
Battery Weight	9.55 KG	8.5 KG/Pcs
Takeoff Weight(Max.)	51.4kg (full load)	62.0 kg (full load)
Payload	22.0kg	32.0kg
Flight Time	Empty load: 21Min ; Full load: 10Min	Empty load: 20~25Min ; Full load: 9.5~18Min
Flight Speed	6 Meter/S	7 Meter/S
Flight Radius	1000 Meters	1000 Meters
Flight Height	2 -2.5 Meters	2 -8 Meters
Flight Control	V7-AG	V7-AG
Propulsion System		
Motor	100 Kv Motor *4	100 Kv Motor *6
Battery Capacity	Flight battery :19,000 mAh (14S)*1; Remote control battery : 10,000 mAh *1	Flight battery :28,000 mAh (14S)*4; Remote control battery : 10,000 mAh *1
Working Voltage	51.8V (14S)	51.8V (14S)
Charging Time	18-20 minutes	12-24 minutes
Recharge Cycles	300-500 times	300-500 times
Spray System		
Liquid Tank Capacity/Payload	22 L	32 L
Spraying Mode	Pressure Spray/Centrifugal Spray	Pressure Spray
Water Pump Pressure	0.2-0.4 mPa	0.2-0.3 mPa
Number of Nozzle	8 pcs high pressure spray misting nozzles, 4 pcs brushless centrifugal nozzles	8 pcs high pressure spray misting nozzles
Spray Width	4~6M	5~8 M
Max Spraying Flow Rate	1.8-2.5L /Min(single pump) 3.6-5L /Min (dual pumps), Max.: 5L /Min	4 L/min
Spray Efficiency	10 Ha/Hour	14.5 Ha/Hour
Operating Temperature	10~50 °C	10~50 °C
Dimension	2150*2150*670mm(unfolded,in operation), 820*850*670mm(folded),	3700*2100*520mm(unfolded,arms excluded),

30L/50L 6 Axis/4 Axis Agricultural drone



A300



A500

Model	A300	A500
Product Name	30L 6 Axis Agriculture drone	50L 4 Axis Agriculture drone
Diagonal Wheelbase	1950 mm	2170 mm
Total Weight	37.8kg (10 KG battery included)	38.0kg (13.3 KG battery included)
Aircraft Weight	27.8 KG (battery excluded)	24.7 KG (battery excluded)
Battery Weight	10 KG	13.3 KG
Takeoff Weight(Max.)	92.0kg (full load)	93.0kg (full load)
Payload	30.0kg	50.0kg (70L spreader)
Hover Time	Empty load: 40Min ; Full load: 10Min	Empty load: 30~40Min ; Full load: 8~10Min
Flight Time	Empty load: 20~25Min ; Full load: 10~12Min	Empty load: 30~40Min ; Full load: 8~10Min
Flight Speed	3 -10 Meter/S	3 -12 Meter/S
Flight Control	Jiyi K++	Jiyi K++
Propulsion System		
Motor	Hobbywing xrotor pro X9 plus	Hobbywing xrotor pro X11 MAX
Battery Capacity	Flight battery :28,000 mAh (14S)*1; Remote control battery : 10,000 mAh *1	Flight battery :30,000 mAh (18S); Remote control battery : 10,000 mAh *1
Working Voltage	53.2V (14S)	68.4V (18S)
Charging Time	12-24 minutes	15-20 minutes
Recharge Cycles	300-500 times	300-500 times
Spray System		
Liquid Tank Capacity/Payload	30L	50L
Spraying Mode	Pressure Spray/Centrifugal Spray	Pressure Spray
Water Pump Pressure	1mPa	1mPa
Number of Nozzle	8 pcs high pressure spray misting nozzles , 2 pcs brushless centrifugal nozzles	8 pcs high pressure spray misting nozzles , 2 pcs brushless centrifugal nozzles
Spray Width	6~8 M	6~9 M
Max Spraying Flow Rate	10 L/min	10 L/min
Spray Efficiency	500-1000 acres / day (6 hours)	500-1500 acres / day (6 hours)
Operating Temperature	10~50°C	10~50°C
Dimension	2050*1610*780mm(unfolded,arms excluded), 1050*620*780mm(folded)	1711*1341*700mm(unfolded,arms excluded), 1010*760*780mm(folded)
Packaging Size	1050*1050*980 mm	1100*850*1000 mm

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