

Derived from the Okuma 4D Concept which focuses on Design, Drive, Drag and Durability as core performance elements, Makaira spinning reels are built from the ground up to the the toughest, most durable spinning reels an angler can own. Constructed from the finest and strongest materials available, Makaira series reels are big game reels developed to pursue everything from Giant Trevally, trophy-sized Yellowtail and Amberjack, to the most formidable adversaries in the ocean, like giant Bluefin Tuna, Marlin, cow Yellowfin Tuna and large sharks.

1.Design: Technology Driven Design. 2.Drive: Helical drive system for improved gear meshing and cranking power. 3.Drag: Carbon fiber DFD with Cal's Universal drag grease for maximum smoothness. 4. Durability: Cutting edge material and processing



## **Design, Drive, Drag, Durability**

#### Patented DFD Drag System:

The Specialized carbon DFD system was specifically engineered to be mounted on the right side of the spool in order to bring all the mechanical workings closer together to maximize alignment and durability. The further mechanical parts are separated, the more opportunity there is for tolerance error and flexing, which causes part alignment issues.

The DFD principle was specifically designed around the "Pull Bar Drag System." The major advantage to this type of drag system is that the drag is being pulled rather than pushed. The most common type of lever drag in the industry is the "Push Bar Drag System." The Push Bar system places heavy pressure on the left side plate and utilizes the frame for overall stability which is a fatal flaw in this type of design. This pressure creates frame flex, reducing drag pressure and causing tolerance alignment issues. This problem is further exaggerated on models from competitors with open top designs. One of the major benefits to the Pull Bar design is that there is no pressure placed on the frame. The Makaira open top model designs will not suffer frame flex found in our competitor's reels.



resistance.

This highly efficient drag system was designed to increase maximum drag pressure, reduce side load pressure on ball bearings and improve heat dissipation for long term smoothness over extended periods. The Okuma DFD is considered a wet drag system comprised of two carbon fiber drag washers that are sandwiched together and bonded with a fiberglass core. Pure carbon washers are coated with a thin layer of Cal Sheet's Universal drag grease for virtually zero start up inertia. These washers are compressed by two precision ground 17-4 grade stainless drag plates that have been ground flat then polished for maximum smoothness. These stainless steel friction drag plates have a minimum 32 Rockwell hardness, allowing for high-end drag settings and consistently smooth drag performance at all ranges. The drag system is secured to the right side of the spool by a 6061-T6 grade aluminum cover that features Type-II anodizing for maximum alignment, strength and corrosion

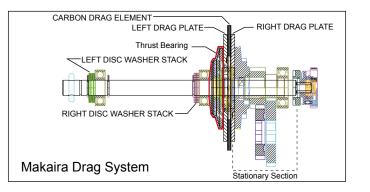


The concept of this drag system is to maximize the workable surface area of the carbon fiber friction washers; so the system has been engineered to make contact with the outer edges of our carbon washers which maximize efficiency and the ability for high drag settings. This is one major flaw with many other lever drags in the industry. Some competitor's reels use a large carbon washer, but the drag plates make contact with the inner diameter of the washer which reduces overall efficiency.

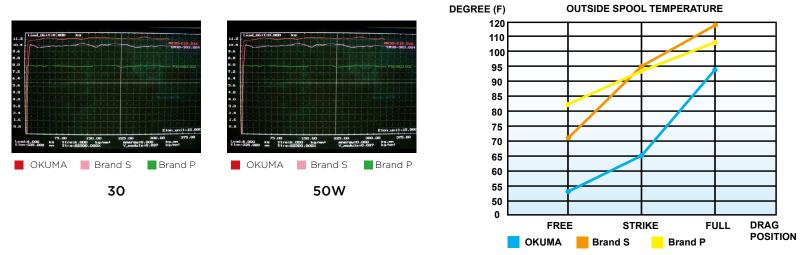
The heart and soul of the Makaira drag system is a specialized custom-made thrust bearing that works in conjunction with the drag system to absorb side load pressure on the ball bearings for maximum performance. This thrust bearing is crucial in the drag system design as it allows anglers to fish heavy drag settings with no visible signs of handle binding. A big complaint currently heard in the market about other lever drags is that with standard to heavy drag settings the handle gets very hard to turn. The Makaira DFD has eliminated this problem from the equation.

The proprietary DFD design defines the Makaira as market leaders in the development of lever drag technology. This unique lever drag system has been granted a United States patent by the Patent and Trademark office clearly establishing this design as new technology for the fishing tackle industry.





## **Drag Smoothness and Performance**



OKUMA



Brand S



Brand P



## **Helical Cut Gearing:**

Makaira lever drag reels utilize helical cut main and pinion gears. This process allows for improved gear meshing which equates to improved gear smoothness. The angled teeth found in helical cut gears engage more gradually than straight cut or spur gear teeth. This allows helical gears to run smoother and quieter compared to spur gears. Spur gears cause impact stress and noise because of the hard meshing, and cannot take as much torque as helical gears because their teeth are receiving impact blows as they mesh together. Okuma 2-speed reels are the only machined aluminum 2-speed lever drag reels in the industry to use helical cut gear technology.



## **Gearing and Shafts:**

The Makaira series of lever drags have been developed with the best possible materials available in the industry. All main gears, pinion gears, drive shafts and spool shafts are machine cut from 17-4 stainless steel. This hybrid material offers the combination of excellent corrosion and heat resistance that is comparable to 304-grade stainless. Engineers frequently choose 17-4 stainless steel due to its high strength as well as its superior corrosion resistance when compared to many other high strength stainless steels. This corrosion resistant material can maintain mechanical properties in temperatures up to 600 degrees Fahrenheit. Cal Sheets, world famous for his blueprinting of top lever drags, has upgraded all of his aftermarket gears and shafts to 17-4 stainless steel. Although 17-4 stainless is cost-preventative for many manufacturers, Okuma set out to design the ultimate 2-speed lever drag and chose to use 17-4 stainless steel in this process.







Okuma Gearing and Shafts

Brand P Gearing and Shafts

Brand S Gearing and Shafts



## **Gear Shift Housing:**

As our flag ship product, Okuma designed a heavy duty 6061-T6 grade aluminum housing for the 2-speed shifting mechanism. This housing offers superior protection when compared to similar reels with graphite housings and is protected from corrosion with a Type-II anodizing process. The porting around the outside of the housing is not for cosmetic purposes. This porting is designed as a drainage system. The new shifter function features an oversized shift button, which requires the need for drainage if water gets under this button. The oversized button was designed so that it would be user friendly for all anglers regardless of finger sizing. Many reels on the market have very small shift buttons that need to be engaged from high speed to low speed, but anglers with large fingers can have difficulty engaging these smaller push button systems.



All Makaira 2-speed reels feature the patented T-bar handle knob. The T-Bar articulated reel handles are the first ergonomically correct reel handles ever developed. The ergonomically correct angle of the T-Bar handle is offset by 18 degrees and ensures maximum power with minimum fatigue. Unlike other reel handles, the T-Bar takes full advantage of the natural dynamics of the human hand, wrist and forearm to help sustain power and endurance for the angler. The T-bar handle is linked to the reel by a heavy duty forged 6061-T6 aluminum handle arm that has been ported to increase strength. A heavy duty stainless steel screw securely attaches the T-bar handle knob to the Type-II anodized handle arm.













## **Ratcheting Drag Lever:**

The Makaira series features a stainless steel drag lever plate that stabilizes and supports the movement of the 6061-T6 aluminum drag lever arm. The drag lever plate is ported along the full arc of the plate and works in conjunction with a stainless steel ball and spring in the drag lever arm for a strong detents that allows for a ratcheting drag lever. This ratcheting drag lever is extremely important for precise drag setting and for preventing drag lever creep that can be caused by the vibration of diesel power boats. In addition, the ratcheting lever helps prevent accidental drag disengagement.

### **Ratcheting Drag Cam:**

All Makaira series reels are equipped with a 303-grade stainless steel drag cam. This drag cam material is excellent for corrosion resistance. In addition, it has the strength to withstand the high pressures that can be applied by the drag system. Okuma equipped this drag cam with detents which allow for a ratcheting system when adjusting the pre-set knob while setting the drag system. In addition, the pre-set drag knob has been laser etched with reference numbers so anglers can better determine their drag settings.









# Frame Design:

All Makaira frames are machine cut from extruded 6061-T6 grade aluminum and protected by a Type-II anodizing process. On all Makaira models, the rear cross bar has been machined so that there is a thumb rest that dramatically aides in reducing fatigue when holding a large reel for extended periods of time.









## **Side Plates:**

Makaira side plates are constructed from 6061-T6 aluminum and are produced by a cold forging process for maximum strength. After the forging process, the side plates are machine cut to exact tolerances. They are then machine engraved and polished for a smooth professional finish. In order to protect these reels from corrosion and reduce fading caused by UV exposure, the side plates have undergone a Type-II anodizing process. For tournament anglers and IGFA record seekers, Okuma machine etched reference numbers into the arc of the right side plate that coincide with the range of the drag lever. These numbers have been placed in precise incremental locations to improve drag reference points for professional anglers.



#### **Anodizing:**

The Makaira body, side plates, spool, drag lever and handle arm are Type-II anodized. The reel foot is forged aluminum and uses a Type-III hard anodizing process for maximum corrosion resistance.

## **Spool Design:**

The Makaira spools are all produced from a cold forging process for maximum strength. This cold forging process compresses more material into the same space for increased strength compared to a standard machine cut spool. These spools are forged with 6061-T6 grade aluminum and are anodized with a Type-II process for long-life durability.

#### Harness Lugs:

All Makaira reels are equipped with stainless steel harness lugs that attach to the inside of the frame. On reels with open top frame designs the harness lugs have a system that we call a "lug and plug system". This system allows anglers to have harness lugs in case they need to lock into a harness, and offers the flexibility to change the harness lugs to flush mounted stainless steel plugs. The stainless steel plugs offer a smooth frame design for anglers that are jigging or live bait fishing and do not require the use of a harness.

#### **Bearings:**

Makaira reels feature 4 precision EZO ball bearings by Sapporo Precision, Inc. in Japan. The Makaira 80W features 6 ball bearings. For all spool shaft bearings, Okuma uses ABEC-5 grade bearings for precision performance under all conditions and are the key to the reels longevity. These ABEC-5 bearings allow friction free spinning for improved casting distance and reduced tension while live baiting. Additionally, both reel series feature a custom designed stainless steel thrust bearing that is located in the right side of the spool. This thrust bearing absorbs side load pressure and allows the handle to crank freely under heavy loads. The thrust bearing is a key component in the Makaira reel design.





#### **Evolution of a Forged Spool:**



2.2:1 & 1.2 :1 6BB+1TB 167

MK-13011



39.7" & 27.7"

1570/80(0.90), 1270/100(1.0), 1000/130(1.12)



Stage 1		Stage 2		ae 2 S	Stage 3			Sta	MK-80WIIS			
	-			010	50 -	<b>y</b>			•	.90 .		MK-130IISE
MAKA	IRA						Max Drag @	Max Drag				
Model	Gear Ratio	Braeings	Weight (oz.)	Line retrieve	Monofilament line capacity (diameter in mm.)	Frame Style	Strike with Freespool	@ Full with Freespool	Frame	Sideplate	Spool	MAKAI
Two-Speed	Lever Drag F	Reels					110030001	110030001				Mode
MK-10II	4.7:1 & 2.1:1	4BB+1TB	26.1	33.5" & 15.0"	460/15(0.37), 380/20(0.42), 280/25(0.48)	Topless	27-lbs	34-lbs	AL	AL	AL	Two-Speed L
MK-15II	4.7:1 & 2.1:1	4BB+1TB	26.8	33.5" & 15.0"	550/20(0.42), 410/25(0.48), 310/30(0.55)	Topless	27-lbs	34-lbs	AL	AL	AL	MK-10IISEa-S
MK-16II	4.3:1 & 1.3:1	4BB+1TB	40.0	39.2" & 11.8	870/20(0.42), 650/25(0.48), 500/30(0.55)	Topless	34-lbs	48-lbs	AL	AL	AL	MK-16IISEa-S
MK-20II	3.8:1 & 1.7:1	4BB+1TB	45.8	39.4" & 17.5"	870/25(0.48), 660/30(0.55), 530/40(0.60)	Topless	37-lbs	55-lbs	AL	AL	AL	MK-20IISEa-S
MK-30II	3.8:1 & 1.7:1	4BB+1TB	50.0	39.4" & 17.5"	850/30(0.55), 700/40(0.60), 550/50(0.70)	Crossbar	37-lbs	55-lbs	AL	AL	AL	MK-30IISEa-
MK-50II	3.2:1 & 1.3:1	4BB+1TB	61.4	37.8" & 15.3"	1000/30(0.55), 650/50(0.70), 400/80(0.90)	Topless	60-lbs	85-lbs	AL	AL	AL	MK-50IISEa-
MK-50WII	3.2:1 & 1.3:1	4BB+1TB	65.0	37.8" & 15.3"	900/50(0.70), 780/60(0.75), 560/80(0.90)	Crossbar	60-lbs	85-lbs	AL	AL	AL	MK-50WIISE
MK-80WII	3.1:1 & 1.2:1	6BB+1TB	116	45.7" & 20.5"	1000/80(0.90), 850/100(1.0), 660/130(1.12)	Crossbar	70-lbs	100-lbs	AL	AL	AL	MK-80WIISE

Crossbar

75-lbs

100-lbs

AL

AL

AL

#### MAKAIRA SEa

	A SEa						Max Drag @	May Drag			
Model	Gear Ratio	Braeings	Weight (oz.)	Line retrieve	Monofilament line capacity (diameter in mm.)	Frame Style	Strike with Freespool	@ Full with Freespool	Frame	Sideplate	Spool
Two-Speed Lev	ver Drag Reel	s									
MK-8IISEa	4.7:1 & 2.1:1	4BB+1TB	24.2	33.5" & 15.0"	320/15(0.37), 260/20(0.42), 195/25(0.48)	Topless	27-lbs	34-lbs	AL	AL	AL
MK-10IISEa	4.7:1 & 2.1:1	4BB+1TB	26.1	33.5" & 15.0"	460/15(0.37), 380/20(0.42), 280/25(0.48)	Topless	27-lbs	34-lbs	AL	AL	AL
MK-15IISEa	4.7:1 & 2.1:1	4BB+1TB	26.8	33.5" & 15.0"	550/20(0.42), 410/25(0.48), 310/30(0.55)	Topless	27-lbs	34-lbs	AL	AL	AL
MK-15TIISEa											
MK-16IISEa	4.3:1 & 1.3:1	4BB+1TB	40.0	39.2" & 11.8	870/20(0.42), 650/25(0.48), 500/30(0.55)	Topless	34-lbs	48-lbs	AL	AL	AL
MK-20IISEa	3.8:1 & 1.7:1	4BB+1TB	45.8	39.4" & 17.5"	870/25(0.48), 660/30(0.55), 530/40(0.60)	Topless	37-lbs	55-lbs	AL	AL	AL
MK-30IISEa	3.8:1 & 1.7:1	4BB+1TB	50.0	39.4" & 17.5"	850/30(0.55), 700/40(0.60), 550/50(0.70)	Crossbar	37-lbs	55-lbs	AL	AL	AL
MK-50IISEa	3.2:1 & 1.3:1	4BB+1TB	61.4	37.8" & 15.3"	1000/30(0.55), 650/50(0.70), 400/80(0.90)	Topless	60-lbs	85-lbs	AL	AL	AL
MK-50WIISEa	3.2:1 & 1.3:1	4BB+1TB	65.0	37.8" & 15.3"	900/50(0.70), 780/60(0.75), 560/80(0.90)	Crossbar	60-lbs	85-lbs	AL	AL	AL
MK-80WIISEa	3.1:1 & 1.2:1	6BB+1TB	116	45.7" & 20.5"	1000/80(0.90), 850/100(1.0), 660/130(1.12)	Crossbar	70-lbs	100-lbs	AL	AL	AL
	0.0.1.0.1.0.1		107			Currentere	75 11	100 //			
MK-130IISEa	2.2:1 & 1.2 :1	6BB+1TB	167	39.7" & 27.7"	1570/80(0.90), 1270/100(1.0), 1000/130(1.12)	Crossbar	75-lbs	100-lbs	AL	AL	AL
MK-I30IISEa MAKAIR/ Model Two-Speed Leve	A SEa-Sil Gear rati	ver	Wei	ght Line retrieve	Monofilament line capacity	Max   Strik	Drag @ Max with @ Ful espool Frees	Drag I with style		AL 9 Sideplates	
MAKAIR	A SEa-Sil Gear rati	<b>Ver</b> ios Bearin	ngs (o:	ght ) Line retrieve	Monofilament line capacity (diameter in mm.)	Max   Strik Free	Drag@Max ke with @Ful	Drag Frame I with style spool	Frame		
MAKAIR/ Model Two-Speed Leve	A SEa-Sil Gear rati er Drag Reels r 4.7:1 & 2	<b>Ver</b> ios Bearin 2.1:1 4BB +	ngs Wei (o: 1TB 26	ght ) Line retrieve .1 33.5" & 15.0	Monofilament line capacity (diameter in mm.) 460/15 (0.37), 380/20 (0.42), 280/25 (0	Max   Strik Free 0.48) 27	Drag @ Max ke with @ Ful espool Frees	Drag Frame I with style spool	Frame	e Sideplates	s Spool
MAKAIR/ Model Two-Speed Leve MK-10IISEa-Silver	<b>A SEa-Sil</b> Gear ration of Drag Reels r 4.7:1 & 2 r 4.3:1 / 1.	Ver ios Bearin 2.1:1 4BB + 3:1 4BB +	ngs (o: 1TB 26 1TB 4C	ght ) Line retrieve .1 33.5" & 15.0 .0 39.2" & 11.8'	Monofilament line capacity (diameter in mm.) 460/15 (0.37), 380/20 (0.42), 280/25 (0 870/20 (0.42), 650/25 (0.48), 500/30 (0	Max   Strik Free 0.48) 27 0.55) 34	Drag @ Max we with @ Ful espool Frees '-lbs 34-	Drag I with spool Ibs Toples	Frame s AL s AL	e Sideplates AL	S Spool
MAKAIR/ Model Two-Speed Leve MK-10IISEa-Silver MK-16IISEa-Silver	A SEa-Sil Gear ration er Drag Reels r 4.7:1 & 2 r 4.3:1 / 1. er 3.8:1 & 1	Ver ios Bearin 2.1:1 4BB + 3:1 4BB + 1.3:1 4BB +	ngs Wei (o: 1TB 26 1TB 4C 1TB 45	ght ) Line retrieve 1 33.5" & 15.0 .0 39.2" & 11.8' .8 39.4" & 17.5	Monofilament line capacity (diameter in mm.) 460/15 (0.37), 380/20 (0.42), 280/25 (0 870/20 (0.42), 650/25 (0.48), 500/30 (0 870/25 (0.48), 660/30 (0.55), 530/40 (0	Max   Strik Free 0.48) 27 0.55) 34 0.60) 37	Drag @ Max ke with @ Ful espool Frees 7-lbs 34- 1-lbs 48-	Drag I with spool Style Ibs Toples Ibs Toples	Frame s AL s AL s AL	AL	S Spool AL AL
MAKAIR/ Model Two-Speed Leve MK-10IISEa-Silver MK-16IISEa-Silver MK-20IISEa-Silver	A SEa-Sil Gear ration of Drag Reels r 4.7:1 & 2 r 4.3:1 / 1. er 3.8:1 & 1 er 3.8:1 & 1	Ver ios Bearin 2.1:1 4BB + 3:1 4BB + 1.3:1 4BB + 1.3:1 4BB +	1TB 26 1TB 40 1TB 45 1TB 50	ght ) Line retrieve .1 33.5" & 15.0 .0 39.2" & 11.8' .8 39.4" & 17.5 .0 39.4" & 17.5	Monofilament line capacity (diameter in mm.) 460/15 (0.37), 380/20 (0.42), 280/25 (0 870/20 (0.42), 650/25 (0.48), 500/30 (0 7 870/25 (0.48), 660/30 (0.55), 530/40 (0 850/30 (0.55), 700/40 (0.60), 550/50 (	Max   Strik Free 0.48) 27 0.55) 34 0.60) 37 0.70) 37	Drag @ Max we with @ Ful espool Frees 7-lbs 34- 1-lbs 48- 7-lbs 55-	Drag I with spool Frame style Ibs Toples Ibs Toples Ibs Toples	Frame s AL s AL s AL s AL	AL AL AL	AL AL
MAKAIR/ Model Two-Speed Leve MK-10IISEa-Silver MK-16IISEa-Silver MK-20IISEa-Silver MK-30IISEa-Silver	A SEa-Sil Gear ration of the second s	Ver     ios   Bearin     2.1:1   4BB +     3:1   4BB +     1.3:1   4BB +     1.3:1   4BB +     0:1   4BB +	Mei     1TB   26     1TB   4C     1TB   4C     1TB   5C     1TB   5C     1TB   61	ght .) Line retrieve .1 33.5" & 15.0 .0 39.2" & 11.8' .8 39.4" & 17.5 .0 39.4" & 17.5 4 37.8" & 11.9'	Monofilament line capacity (diameter in mm.) 460/15 (0.37), 380/20 (0.42), 280/25 (0 870/20 (0.42), 650/25 (0.48), 500/30 (0 870/25 (0.48), 660/30 (0.55), 530/40 (0 850/30 (0.55), 700/40 (0.60), 550/50 (0 1000/30 (0.55), 650/50 (0.70), 400/80 (0	Max   Strik Free 0.48) 27 0.55) 34 0.60) 37 0.70) 37 (0.90) 60	Drag @ Max with @ Ful espool Frees 7-lbs 34- 1-lbs 48- 7-lbs 55- 7-lbs 55- 7-lbs 55-	Drag I with spool Toples Ibs Toples Ibs Toples Ibs Toples Ibs Toples	Frame s AL s AL s AL s AL s AL	AL AL AL AL AL	AL AL AL AL
MAKAIR/ Model Two-Speed Leve MK-10IISEa-Silver MK-16IISEa-Silver MK-20IISEa-Silver MK-30IISEa-Silver	A SEa-Sil Gear ration er Drag Reels r 4.7:1 & 2 r 4.3:1 / 1. er 3.8:1 & 1 er 3.8:1 & 1 er 3.2:1 & 1 lver 3.2:1 & 1	Ver     ios   Bearin     2.1:1   4BB +     3:1   4BB +     .3:1   4BB +     .3:1   4BB +     .0:1   4BB +     .0:1   4BB +	ITB   26     ITB   4C     ITB   4C     ITB   5C     ITB   61     ITB   65	ght ) Line retrieve .1 33.5" & 15.0 .0 39.2" & 11.8' .8 39.4" & 17.5 .0 39.4" & 17.5 4 37.8" & 11.9' .0 37.8" & 11.9'	Monofilament line capacity (diameter in mm.) 460/15 (0.37), 380/20 (0.42), 280/25 (0 870/20 (0.42), 650/25 (0.48), 500/30 (0 870/25 (0.48), 660/30 (0.55), 530/40 (0 850/30 (0.55), 700/40 (0.60), 550/50 (0 1000/30 (0.55), 650/50 (0.70), 400/80 (0 900/50 (0.70), 780/60 (0.75), 560/80 (0	Max   Strik Free 0.48) 27 0.55) 34 0.60) 37 0.70) 37 (0.90) 6C 0.90) 6C	Drag @ Max we with @ Ful espool Frees 7-lbs 34- 1-lbs 48- 7-lbs 55- 7-lbs 55- 0-lbs 85-	Drag I with spool roples Ibs Toples Ibs Toples Ibs Toples Ibs Toples Ibs Toples Ibs Toples	Frame s AL s AL s AL s AL s AL ar AL	AL AL AL AL AL AL	AL AL AL AL AL

MAKAIRA	A SEa							Max Drag @	Max Drag			
Model	Gear Ratio	Braeings	Wei (oz	-	Line retrieve	Monofilament line capacity (diameter in mm.)	Frame Style	Strike with Freespool	@ Full with Freespool	Frame	Sideplate	Spool
Two-Speed Lev	ver Drag Ree	ls										
MK-8IISEa	4.7:1 & 2.1:1	4BB+1TB	8 24	.2 3	3.5" & 15.0"	320/15(0.37), 260/20(0.42), 195/25(0.48)	Topless	27-lbs	34-lbs	AL	AL	AL
MK-10IISEa	4.7:1 & 2.1:1	4BB+1TB	26	5.1 3	3.5" & 15.0"	460/15(0.37), 380/20(0.42), 280/25(0.48)	Topless	27-lbs	34-lbs	AL	AL	AL
MK-15IISEa	4.7:1 & 2.1:1	4BB+1TB	26	.8 3	3.5" & 15.0"	550/20(0.42), 410/25(0.48), 310/30(0.55)	Topless	27-lbs	34-lbs	AL	AL	AL
MK-15TIISEa												
MK-16IISEa	4.3:1 & 1.3:1	4BB+1TB	40	.0 3	39.2" & 11.8	870/20(0.42), 650/25(0.48), 500/30(0.55)	Topless	34-lbs	48-lbs	AL	AL	AL
MK-20IISEa	3.8:1 & 1.7:1	4BB+1TB	45	.8 3	9.4" & 17.5"	870/25(0.48), 660/30(0.55), 530/40(0.60)	Topless	37-lbs	55-lbs	AL	AL	AL
MK-30IISEa	3.8:1 & 1.7:1	4BB+1TB	50	.0 3	9.4" & 17.5"	850/30(0.55), 700/40(0.60), 550/50(0.70)	Crossbar	37-lbs	55-lbs	AL	AL	AL
MK-50IISEa	3.2:1 & 1.3:1	4BB+1TB	61.	.4 3	7.8" & 15.3"	1000/30(0.55), 650/50(0.70), 400/80(0.90)	Topless	60-lbs	85-lbs	AL	AL	AL
MK-50WIISEa	3.2:1 & 1.3:1	4BB+1TB	65	.0 3	7.8" & 15.3"	900/50(0.70), 780/60(0.75), 560/80(0.90)	Crossbar	60-lbs	85-lbs	AL	AL	AL
MK-80WIISEa	3.1:1 & 1.2:1	6BB+1TB	110	6 4	5.7" & 20.5"	1000/80(0.90), 850/100(1.0), 660/130(1.12)	Crossbar	70-lbs	100-lbs	AL	AL	AL
MK-130IISEa	2.2:1 & 1.2 :1	6BB+1TB	16	7 39	9.7" & 27.7"	1570/80(0.90), 1270/100(1.0), 1000/130(1.12)	Crossbar	75-lbs	100-lbs	AL	AL	AL
MAKAIRA Model	Gear rat		rings	Weight (oz.)	Line retrieve	Monofilament line capacity (diameter in mm.)	Strik	Prag @ Max   e with @ Ful spool Frees	l with style	Frame	e Sideplates	; Spool
MK-10IISEa-Silver		2.1:1 4BB	+ 1TB	26.1	33.5" & 15.0"	460/15 (0.37), 380/20 (0.42), 280/25 (0	0.48) 27	-lbs 34-	lbs Toples	s AL	AL	AL
MK-16IISEa-Silver	4.3:1 / 1.	.3:1 4BB	+ 1TB	40.0	39.2" & 11.8"	870/20 (0.42), 650/25 (0.48), 500/30 (	(0.55) 34	-lbs 48-	lbs Toples	s AL	AL	AL
MK-20IISEa-Silve	r 3.8:1 & '	1.3:1 4BB	+ 1TB	45.8	39.4" & 17.5"	870/25 (0.48), 660/30 (0.55), 530/40 (	0.60) 37	-lbs 55-	lbs Toples	s AL	AL	AL
MK-30IISEa-Silve	r 3.8:1 & '	1.3:1 4BB	+ 1TB	50.0	39.4" & 17.5"	850/30 (0.55), 700/40 (0.60), 550/50 (	(0.70) 37	-lbs 55-	lbs Toples	s AL	AL	AL
MK-50IISEa-Silve	r 3.2:1 & 1	1.0:1 4BB	+ 1TB	61.4	37.8" & 11.9"	1000/30 (0.55), 650/50 (0.70), 400/80	(0.90) 60	-lbs 85-	lbs Toples	s AL	AL	AL
MK-50WIISEa-Sil	ver 3.2:1 & 1	1.0:1 4BB	+ 1TB	65.0	37.8" & 11.9"	900/50 (0.70), 780/60 (0.75), 560/80 (	(0.90) 60	-lbs 85-	lbs Crossb	ar AL	AL	AL
MK-80WIISEa-Si	ver 3.1:1 & 1	I.2:1 6BB	+ 1TB	116.0	45.7" & 20.5"	1000/80 (0.90), 850/100 (1.0), 660/130	(1.12) 70	-lbs 100	-lbs Crossb	ar AL	AL	AL
MK-130IISEa-Silve	er 2.2:1 & 1	.2:1 6BB	+ 1TB	167.0	39.7" & 21.7"	1570/80 (0.90), 1270/100 (1.0), 1000/130	) (1.12) 75	-lbs 100	-lbs Crossb	ar AL	AL	AL

## Line Pin System:

In designing the Makaira range, Okuma set out to try and think through every possibility that might improve an anglers experience in fishing and tackle preparation. In the image on the side you will see a patented new line pin system. This system has a head on the pin so that your knot will not slip off over the top of the pin, which can happen on some of our competitors reels. Anglers using braided line no longer need to back the spool or apply any type of material to prevent line slippage. By securing your knot directly to the line pin you will have a secure non-slip system for attaching braided line or monofilament. Some anglers do not prefer line pins because they stick up to far on the spool arbor, causing problems when line gets low on the spool and also when stripping line off for re-spooling. The line can hit this raised pin while respooling and cause a dangerous situation if you are not paying close attention to what you are doing. The patented new system recesses this pin into the arbor of the spool so that the head of the pin is nearly flush with the spool arbor. This new design gives you the major advantage of ensuring your line will not slip and it eliminates problems with raised spool pins that our competitors are currently using.





#### Grease and Oil:

To further enhance the corrosion resistance of Makaira reels, Okuma applies our CRC or Corrosion Resistant Coating process to all internal and external parts for maximum protection. Our CRC process utilizes a coating process of Corrosion X HD formula that actually penetrates and bonds to the aluminum parts for long term protection. The extra steps taken in the assembly of the Makaira allows this reel to be a leader in the fishing tackle industry for long term use and performance. To further enhance the Makaira's function and performance, Okuma applies Cal's Universal drag grease to our carbon fiber drag washers for the smoothest wet drag system. The addition of Cal's drag grease allows for virtually zero start up inertia and smooth performance at all settings. Cal's Universal grease is also used for coating moving parts such as the main and pinion gears for improved performance.

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### **Reel Foot and Reel Clamps:**

The 6061-T6 aluminum reel foot and the reel clamp are both produced by a cold forging process for maximum strength. These parts are protected by a Type-III hard anodized application which is the best possible protection available for this type of material. In addition, we apply a gasket that is covered in grease to further prevent corrosion and eliminate water from getting trapped between the frame and reel foot. Many of our competitors are using a stainless steel reel foot. Anytime dissimilar materials come in contact with each other, an environment is created that causes electrolysis and leads to corrosion. A stainless steel reel foot mounted to an aluminum frame will cause corrosion over time. In addition, a stainless steel reel foot can bend under heavy loads of pressure, which is a potential disadvantage when targeting big fish.









## **Body Screws:**

Makaira reels use stainless steel torque head screws for proper tightening, because reel technicians can get a better bite on the screw head with the torque head design. Torque head screws are more stable and have less potential for stripping when compared to Allen and Phillip style screws. In addition, our screw design is using a coarse threaded screw to maximize the thread link, which in turn, improves the holding power of the screw, preventing accidental loosening of screws as a result of boat vibration. This also allows for less potential of having screws stripping if customers do not maintain the reel and reapply grease in the screw holes over years of fishing. Okuma also applies heavy duty grease for ultimate corrosion resistance on all Makaira body and side plate screws. To further aide in reducing corrosion and allowing for areas that water can be trapped, the Makaira side plates have been cut out around each side plate screw to promote the flow of water away from the side plate screws.







## **Silent Anti-Reverse:**

The Makaira's proprietary anti-reverse system allows for a smoother and quieter feeling. When compared to other reels in the market. Most reels in the market hide their rough gear quality by the noise and vibration caused by the engagement and clacking of the anti-reverse pawls. The Okuma silent system is unlike any other 2-speed reel in the industry for smoothness. This anti-reverse system is supported by a 12 point double dog anti-reverse pawl system. The Makaira system is very simple in principal but the performance is extremely advanced. As you turn the reel forward the anti-reverse pawls slide open allowing a friction free and quiet retrieve. As soon as the handle is stopped or pulled backwards the anti-reverse pawls are engaged into place by their drive shaft actuated sliding system. The strength of

this anti-reverse system does not solely rely on a dog spring like found on most of our competitors reels. The sliding function does not rely heavily on a dog spring system and is mainly controlled by the forward and reverse movement applied to the drive shaft through the movement of the angler turning the handle.



## **Clicker Function:**

In order to create the loudest most durable clicker design for the 20 through 80-size Makaira reels, Okuma has incorporated a large diameter stainless steel ratchet that attaches to the right side of the spool. This oversized ratchet is engaged by a heavy duty spring loaded ball system that is actuated by an oversized On/Off lever. The location of this On/Off lever was strategically placed so deckhands can easily disengage a clicker if they want to quickly drop back baits on fish that enter a trolling spread. The location we chose allows anglers a one hand operation to turn off the clicker and also manipulate the drag lever due to its close proximity.

For the smaller 10/15-size reels that are traditionally used for live bait fishing, jigging and casting, Okuma opted for a traditional stainless steel wishbone clicker design. The On/Off button is positioned on the left side plate and recessed into the frame so that it does not interfere with fishing applications. This design was also chosen for the smaller reels to reduce weight.





## **MAKAIRA**SEa Elite Lever Drag Reels

#### Makaira SEa Reel Features: Makaira SEa Reel Features:

- Open spool bearings with TSI-301 oil. Increases freespool 2-1/2 times.
- All non-spool bearings feature full grease pack for maximum longevity.
- Features Special Edition Gun Smoke and Black anodizing.
- SE reels feature a yellowfin tuna etched into the sideplate.
- Frames have been machined out for increased clearance between spool and cross bars.
- MK-8/10/15/16 feature MK-20 size handle knobs.
- MK-20/30 feature the MK-50 handle arm and knobs
- New lower speed 1.3:1 gear ratio featured in 20/30 sizes.
- New lower speed 1.0:1 gear ratio featured in 50 size.
- Type-II gunmetal anodized frame, side plates, spool, drag lever and handle















MK15II-SEa



MK10II-SEa





# MAKAIR

Tournament Drag Cam IGFA line classes for Makaira



TDC-80WII/130II TDC-50II

Okuma's TDC or "Tournament Drag Cam" is designed with a more gradual ramp in the cam system that is intended for anglers fishing light line and toumament IGFA line classes. The standard cam that is installed in the Makaira reels is engineered to be compatible with braided line and offers aggressive drag ramps in order to output heavy drag ratings. Makaira reels are engineered to output extreme drag pressure, but this is not required by all anglers. These reels have been designed to offer customization and with the TDC cam system, Okuma is offering anglers a reel that is versatile for a wide range of fishing applications, allowing a more gradual increase in drag settings.





#### TDC-50II/50WII TDC-16II/20II/30II TDC-8II/10II/15II

TDC-811-1011/1511 \*Also fits Andros 12N11 / 1211 / 1611



#### MAKAIRA SPINNING REEL MAKAIRA SPINNING REELS FEATURE:

- Forged aluminum, machine cut body/sideplate
- Forged aluminum, machine cut Cyclonc Flow rotor
- Forged stainless steel main gear for ultimate power and strength
- Precision machine cut 17-4 grade stainless steel pinion gear
- Oversized 17-4 grade stainless steel spool shaft reduces flex
- Hydro Sealed Body and DFD system for maximum protection
- Carbonite high output drag with Cal's drag grease on full DFD
- Customized pre-set drag system, works like a lever drag reel
- 9HPB + 1RB corrosion resistant stainless steel bearings
- Dual anti-reverse system for maximum strength and reliability
- Quick-Set stainless steel German anti-reverse roller bearing
- CRC: Corrosion-resistant coating process
- Machined aluminum, 2-tone anodized spool with LCS lip
- Machined aluminum screw-in handle arm for added strength
- Right and Left handles are designed differently: Order by Rt/Lt
- Heavy duty, solid aluminum bail wire with manual trip function
- Rotor brake system works in conjunction with manual bail trip
- Machined aluminum handle knob: Custom options available

#### Makaira Spinning Reel Owner's Manual

Congratulations and thank you for purchasing your new premium Makaira spinning reel. These reels are the culmination of years of research, development and testing and have set the highest standards for what can be expected from an elite saltwater spinning reel.

Please take a few moments to go through the following manual to familiarize yourself with the features, functions and benefits of your new reel. We thank you for making Okuma your brand of choice.

Derived from Okuma's 4D Concept which incorporates the Design, Drive, Drag and Durability into one overall design concept, the Makaira spinning reels were built from the ground up to be the toughest and most durable spinning reel available in the industry. Made from only the finest, most Giant Trevally, Yellowtail, Amberjack and Sailfish to the biggest bruisers in the ocean like giant Bluefin Tuna, Marlin, Cow Yellowfin tuna and large sharks.

When ordering Makaira spinning reels they are designated as left hard or right crank. For charter captains that require the ability to switch back and forth between left or right hand retrieve for clients, a second handle will be required. The reason for this design is that Okuma set out to build the ultimate big game spinning reel and we wanted to eliminate all potential areas of weakness. By building the reel in this fashion we are ensuring that regardless of an angler cranking left or right handed, there will be no weak links in this system.

#### About Your New Spinning Reel

#### Makaira Drag System



The Makaira spinning reel features a unique high output drag that can achieve extreme max pressures over 65-lbs. This unique drag system works very much like a conventional lever drag reel allowing anglers to pre-set their drag based on their target species or required drag output. The precision adjustment works with Okuma's DFD or Dual Force Drag system which comprises a wet Carbonite drag system with Cal's drag grease for low start up inertia and extreme heat protection. This is a fully sealed drag system so it is recommended when you service the drag, you have it worked on by an authorized Okuma technician. In order to set your drag you will first want to rotate the main drag knob to the zero position. The drag knob is indexed with numbers from 0-20 with detents in between each number for a very wide range of precision adjustments.

Once at the zero position, locate the silver pre-set dial in the center of the drag knob. By adjusting this silver dial, you will be able to pre-set your drag to customize your own settings. Like a lever drag reel, you will need a starting point to test the current settings with a scale. If the drag is either too high or too low, then you back the main drag knob to zero and readjust the silver pre-set knob then retest again. Continue this process until you achieve your optimum setting. Never adjust the pre-set knob while under pressure. The drag knob should always be backed off to zero before adjusting the pre-set knob in order to avoid damage to the drag cam.



The concept of this drag system is to maximize the workable surface area of the carbon fiber drag washers; so the system has been engineered to make contact with the outer edges of our carbon washers which maximizes efficiency and the ability for high drag settings. The DFD concept applies pressure to both sides of the spool in order to maximize all usable surface area which enhances the working surface area of our drag system, but also dramatically helps with heat dissipation.

#### Operating Procedures



#### Filling Your Reel with Line

Regardless of what line you use, Okuma recommends filling your reel to approximately 1/8" from the rim or lip of the spool. A full spool will aid in casting distance and make it easier and faster to retrieve line. Make sure your line is put on tightly in order to avoid the line cutting into itself under heavy drag settings. Most tackle shops can do this with a line winding machine, but if you do it yourself, here are a couple tips:

The following is information and tips for smooth operation of your new Makaira spinning reel.

You want to make sure you avoid line twists as much as possible. Thread the line from the bulk spool though your rod guides and around your reel spool. Be sure to tie a good knot and if you are fishing braided line, it is crucial you back your reel with mono or use tape in order to avoid the full spool of line from slipping. As you start cranking line off the bulk spool to your reel, it is important to apply pressure, however you need to reduce the amount of tension you place directly on the line. Applying pressure directly to the line can cause heat buildup and weakens your line. When spooling by hand, apply pressure directly to the bulk spool.

#### Maintenance Instructions

Makaira reels are premium spinning reels made with the finest materials available in the industry. In order to enhance our customers maintenance program, all Makaira reels incorporate our CRC or Corrosion Resistance Coating process. This is basically an oil bath of Corrosion X HD formula for all internal and external parts that both lubricate and penetrate all metal parts. Although Okuma takes extra steps to avoid corrosion, the reels still require maintenance because grease and oil do not last a lifetime. The Makaira spinning reels feature multiple waterproofing O-rings which further protect the internal system. As a result of these O-rings, servicing these reels is more complicated and should be done by an authorized Okuma technician. It is recommended that your reel is serviced once per year if fished in normal to heavy use.

www.okumafishingusa.com





#### Cleaning

Regular basic cleaning of your reel will help keep it in top shape. Saltwater contains highly corrosive elements that can damage your reel if they are not properly removed. Even though these reels are made of high quality anodized aluminum components and stainless steel, and every effort was made to prevent corrosion by incorporating our CRC process, saltwater will cause corrosion over time if not properly maintained. The best way to prevent corrosion damage from occurring in your reel is to keep it clean.

At a minimum your reel should be rinsed thoroughly with freshwater after every use. Fresh water will not damage the reel and will help wash away any salt deposits that are left behind from exposure to saltwater. After rinsing, it is recommended to wipe the external surfaces with Corrosion X or Corrosion X HD formula. Do not use a formula such as WD-40 as this will degrease and remove any protective oils you have on the reel to protect against corrosion.



Note: DO NOT submerge your reel or use a hard direct spray of freshwater on the reel as this can drive debris such as salt, sand, oils and other contaminants into the core of your reel. Even though the drag system is sealed, it is still recommended that you engage the drag while rinsing the reel. When storing the reel for extended periods, it is recommended to back the drag to zero.

Makaira Warranty Makaira reels are backed by an industry leading 5-year limited warranty. During this period, Okuma will offer one free lube and service during the warranty period. Anglers just need to pay inbound and outbound freight. For additional details and procedures on Makaira's warranty, please review the warranty card included in the box.

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#### MAKAIRA SPINNING REEL HANDLES



#### (Left Hand Model)

Description	Original Factory Handle	Reel Compatability	Handle Length	
Left Hand Crank with Ergo	MK-100001	10000/20000/30000 LS/PS	76mm	
Grip Handle Knob	MR-10000E	10000/20000/30000 E3/N3	7011111	
Right Hand Crank with Ergo	MK-10000P	10000/20000/Z0000 LS/PS	76mm	
Grip Handle Knob	MK-10000K	10000/20000/30000 ES/RS	7011111	
Left Hand Crank with	MK 20000/200001 S	10000/20000/70000   5/05	83mm	
Aluminum Handle Knob	MK-20000/30000ES	10000/20000/30000 LS/RS	0311111	
Right Hand Crank with	MK 20000/200005	10000/20000/70000   5/05	97mm	
Aluminum Handle Knob	MR-20000/30000RS	10000/20000/30000 L3/R3	83mm	
	Left Hand Crank with Ergo Grip Handle Knob Right Hand Crank with Ergo Grip Handle Knob Left Hand Crank with Aluminum Handle Knob Right Hand Crank with	Left Hand Crank with Ergo MK-10000L   Grip Handle Knob MK-10000R   Right Hand Crank with Ergo MK-10000R   Left Hand Crank with MK-20000/30000LS   Aluminum Handle Knob MK-20000/30000LS   Right Hand Crank with MK-20000/30000LS	Left Hand Crank with Ergo MK-10000L 10000/20000/30000 LS/RS   Right Hand Crank with Ergo MK-10000R 10000/20000/30000 LS/RS   Grip Handle Knob MK-10000R 10000/20000/30000 LS/RS   Left Hand Crank with MK-20000/30000 LS/RS 10000/20000/30000 LS/RS   Aluminum Handle Knob MK-20000/30000 LS/RS 10000/20000/30000 LS/RS   Right Hand Crank with MK-20000/30000 LS/RS 10000/20000/30000 LS/RS	

# okuma

#### MAKAIRA SPINNING

Model	Gear Bearings ratio		Weight (oz.)	Line retrieve
Left handed spi	inning	reels		
MK-10000L	4.9:1	9HPB + 1RB	28.2	40″
MK-20000LS	5.8:1	9HPB + 1RB	35	51.6″
MK-30000LS	5.8:1	9HPB + 1RB	39	65.7″
Right handed s	pinning	reels		
MK-10000R	4.9:1	9HPB + 1RB	28.2	40″
MK-20000RS	5.8:1	9HPB + 1RB	35	51.6″
MK-30000RS	5.8:1	9HPB + 1RB	39	65.7″



MK-10000R (Right Hand Model)

ŀ	Max Drag Pressure	Monofilament line capacity (diameter in mm.)	Braided line rating (Tuf line)	Frame	Sideplates	Rotor	Spool	
55-lbs	470/12 (0.32), 340/15	415/50, 290/65	AL	AL	AL	AL		
	(0.37), 280/20 (0.42)	415/ 50, 290/ 05	AL	AL	AL	AL		
66-lbs	580/20 (0.42), 430/25	490/65, 400/80	AL	AL	AL	AL		
	(0.48), 330/30 (0.55)	490/65, 400/60				AL		
66-lbs	490/40 (0.60), 360/50	700/80, 570/100	AL	AL	AL	AL		
	(0.70), 300/60(0.75)	700/80, 570/100	AL	AL	AL	AL		
55-lbs	470/12 (0.32), 340/15	415/50,000/65	AL	AL	AL	AL		
	(0.37), 280/20 (0.42)	415/50, 290/65				AL		
<u> </u>	580/20 (0.42), 430/25	400/05 400/00		A 1		AL		
	66-lbs	(0.48), 330/30 (0.55)	490/65, 400/80	AL	AL	AL	AL	
	66-lbs	490/40 (0.60), 360/50	700/00 570/100	A 1	A 1		AI	
	00-105	(0.70), 300/60(0.75)	700/80, 570/100	AL	AL	AL	AL	



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