

















#### THE OCONNOR STORY

OConnor Engineering Laboratories was founded in 1949 by Chadwell O'Connor. Chad, once a designer and builder of steam power plants, always had a passion for steam locomotives.

In the late 1940s, he decided to document them on film before they were all gone, but found it impossible to pan smoothly with his Bell & Howell camera. To solve this problem, Chad designed and built a Fluid Head camera support that would allow his lightweight camera to follow the moving trains without jumps, and distracting starts and stops. One day, in 1949 while he was filming the trains at Glendale Station, another steam train enthusiast noticed this unusual setup and stopped to ask a few questions. He liked the concept, and asked Chad to build a Fluid Head that would solve pan & tilt problems on his new film, 'The Living Desert'.

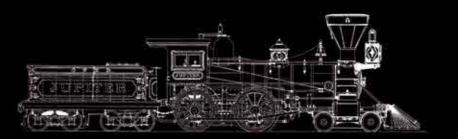
The man was Walt Disney.

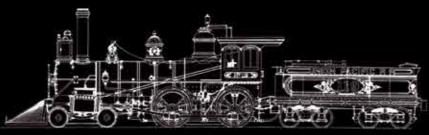
Disney was so happy with his first OConnor head that he immediately ordered 10 more. His film, The Living Desert, won the first Academy Award for Documentary Feature in 1953. To produce his new fluid head, OConnor founded a part-time business in 1952, first building them in his garage and then from a small factory on Green Street in Pasadena, which his wife Regina ran during the day. By 1969 OConnor Engineering Labs was so successful that OConnor left his "day job" at Pasadena Power and Light to work full time on camera heads and steam engines at O'Connor Engineering. He enjoyed working with cameramen, by inventing solutions for their needs. He produced thousands of OConnor fluid heads and legs, such as the ever-popular O'Connor 100, so renowned for its ruggedness that it is still a staple of camerawork worldwide.

Today OConnor Engineering specializes in heavy-duty fluid heads, tripods and camera accessories. As a VITEC GROUP brand, OConnor has a large dealer networking spanning the United States and in more than two dozen countries across six continents.

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#### GOLDEN SPIKE NATIONAL HISTORIC SITE





Conter Engineering Laboration

ASSEMBLY OUTLINE OF REPLICA LOCOMOTIVES UNION PACIFIC RAILROAD NO. 119 CENTRAL PACIFIC RAILROAD NO. 60 "JUPITER"

BIONE BY US ENGINERIGED AS GONE PROOF.



#### CHAD O'CONNOR

Chadwell (Chad) O'Connor, founder of OConnor Engineering, was an inventor, steam engine enthusiast, and is most remembered as the inventor of the fluid-damped camera head, an achievement for which he won an Academy Award in 1992. OConnor Engineering continues to produce camera support equipment to this day.

O'Connor's early home environment in his native Boston likely contributed to his active mind. Johnson O'Connor, his father, was a well-known psychometrician and pioneer in the study of aptitude testing. His mother died while he was young, and his father remarried MIT-trained architect and educator Eleanor Manning. The young O'Connor acquired his interest in engineering during frequent trips to the Lynn, Massachusetts factory of his father's employer, General Electric. O'Connor attended the Stevens Institute of Technology and California Institute of Technology where he earned a degree in mechanical engineering. World War II broke out shortly after his college graduation, and O'Connor joined Douglas Aircraft where he was put in charge of expediting aircraft production and repair.

O'Connor joined Pasadena Power and Light in California after the war as chief engineer. He had been interested in steam engines since he was a boy, and he applied this knowledge at the power company to improve power production and incineration. In 1974, he used this experience to develop the O'Connor Rotary Combustor that burned municipal garbage to create steam for power generation. The first pilot plant was built in Japan. In 1980 a production facility was built in Gallatin, Tennessee that burned 200 tons of municipal waste a day. This technology was spun out of O'Connor's company, O'Connor Engineering to a separate company that was later purchased by Westinghouse.

O'Connor's life-long fascination with steam locomotives, which he realized were a dying breed, continued as a hobby. He became involved in the refurbishment and reproduction of classic steam locomotives, recreating the drawings and producing copies of the 119 and Jupiter locomotives that met for the driving of the first transcontinental railroad's Golden spike at Promontory Summit, Utah. He also tried his hand at photographing steam engines in motion, which led to his best known invention.

As he tried photographing moving trains, he became annoyed by the jerkiness of the pictures. To solve this problem he developed a silicon-filled platform that interfaced between the tripod and the camera to allow smooth panning and tilting of the camera. He had invented the fluid-damped camera head, a technology still utilized by top-of-the-line camera support makers worldwide.





Chad O'Connor, found of OConnor Engineer

At the time, he still viewed the head and his photography as a hobby, and he shot more than 100,000 feet of film of steam engines in action during their final days. But one day in 1952, while filming near Glendale California, another steam enthusiast tapped him on the shoulder and asked to look through the view finder. The stranger seemed to know his way around cameras, so O'Connor gave him a chance to try the head out. The man was so impressed that he asked if O'Connor could make more for him. O'Connor agreed but said it would take time as he built them in his garage. The man said, "But I need it right away. Oh, by the way, my name is Walt Disney."

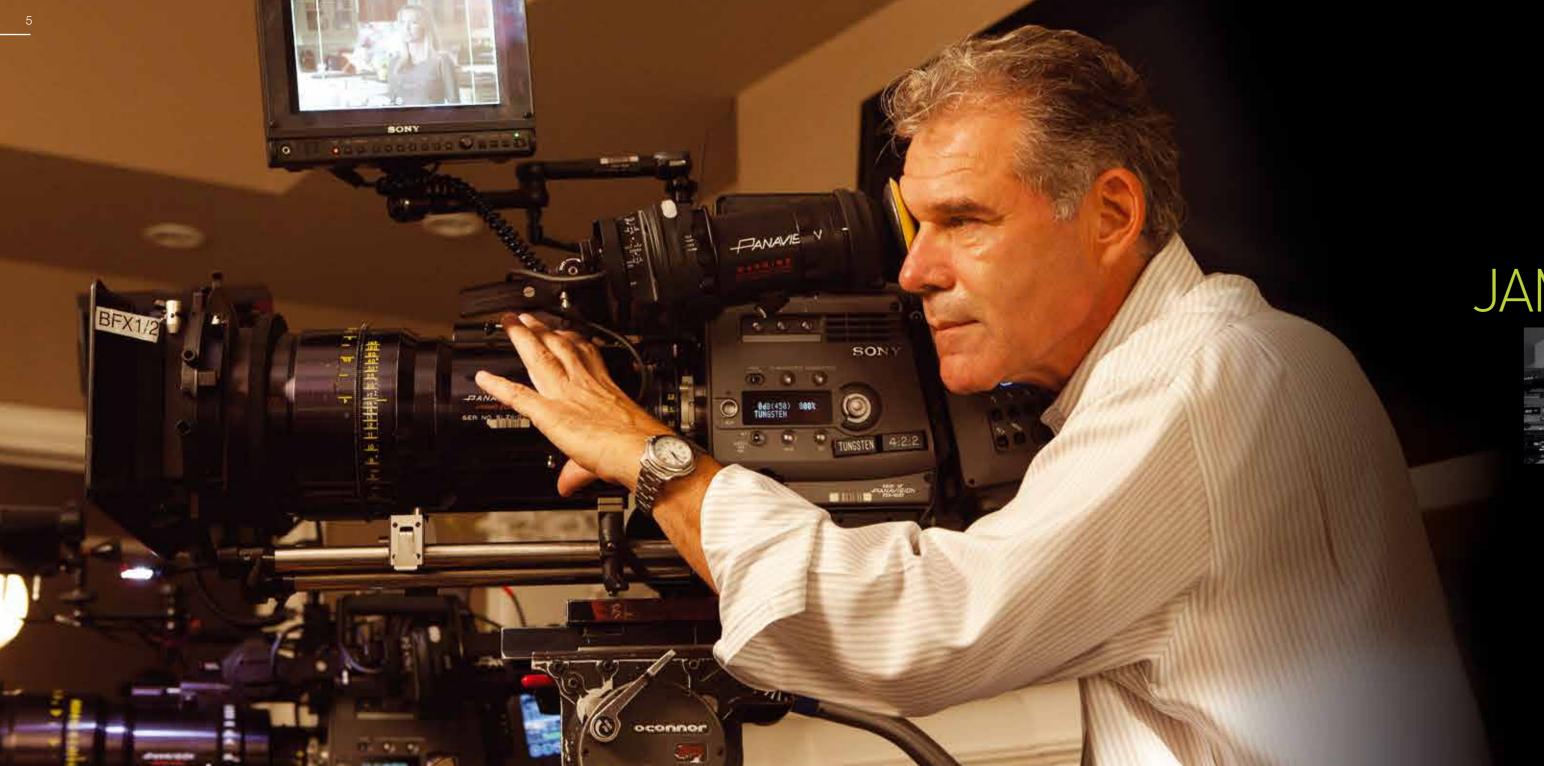
Disney was then shooting one of his first nature studies, The Living Desert, and needed a way to shoot moving animals smoothly. The O'Connor head was so successful that Disney immediately ordered 10 more. This film won the first Academy Award for Documentary Feature in 1953. O'Connor founded a part-time business in 1952 to make the heads, first building them in his garage and then from a small factory on Green Street in Pasadena, which his wife Regina ran during the day. By 1969 the business was so successful that he left the power company to work full time on camera heads and steam engines at O'Connor Engineering. He enjoyed working with cameramen, by inventing solutions for their needs. He produced thousands of OConnor fluid heads and legs, from the ever-popular O'Connor 100, so renowned for its ruggedness that it is still a staple of camerawork worldwide, to the OConnor 2575, which was made to complement today's high-end film and television production.

O'Connor and Disney maintained a life-long friendship and business relationship. O'Connor designed the power systems for the steam launches and paddle wheelers at Disney World in Florida.

In 1975 the Academy of Motion Picture Arts and Sciences presented O'Connor with a Class II Scientific and Engineering Award and in 1992, they awarded him the Academy Award of Merit, the Oscar, for his work on the fluid head. In his lifetime, O'Connor received 29 US patents.

Chad O'Connor died on September 5, 2007.





## JAMES BAGDONAS

Starting with Boston Legal and then on Modern Family we began to use a style of shooting that could only be done with a fluid head. That is to say that the operators must always have a hand free. What that enables us to do, is constantly change the frame size on the zoom lens. Many of the shots are not rehearsed and at times the operators even have to grab the focus knob! As style and my own personal likes change, I can't see using any other head. OConnor has always been the best. It just feels good in your hands. And that gives

California-based cinematographer James R. Bagdonas, ASC Cinematographer for "Modern Family"

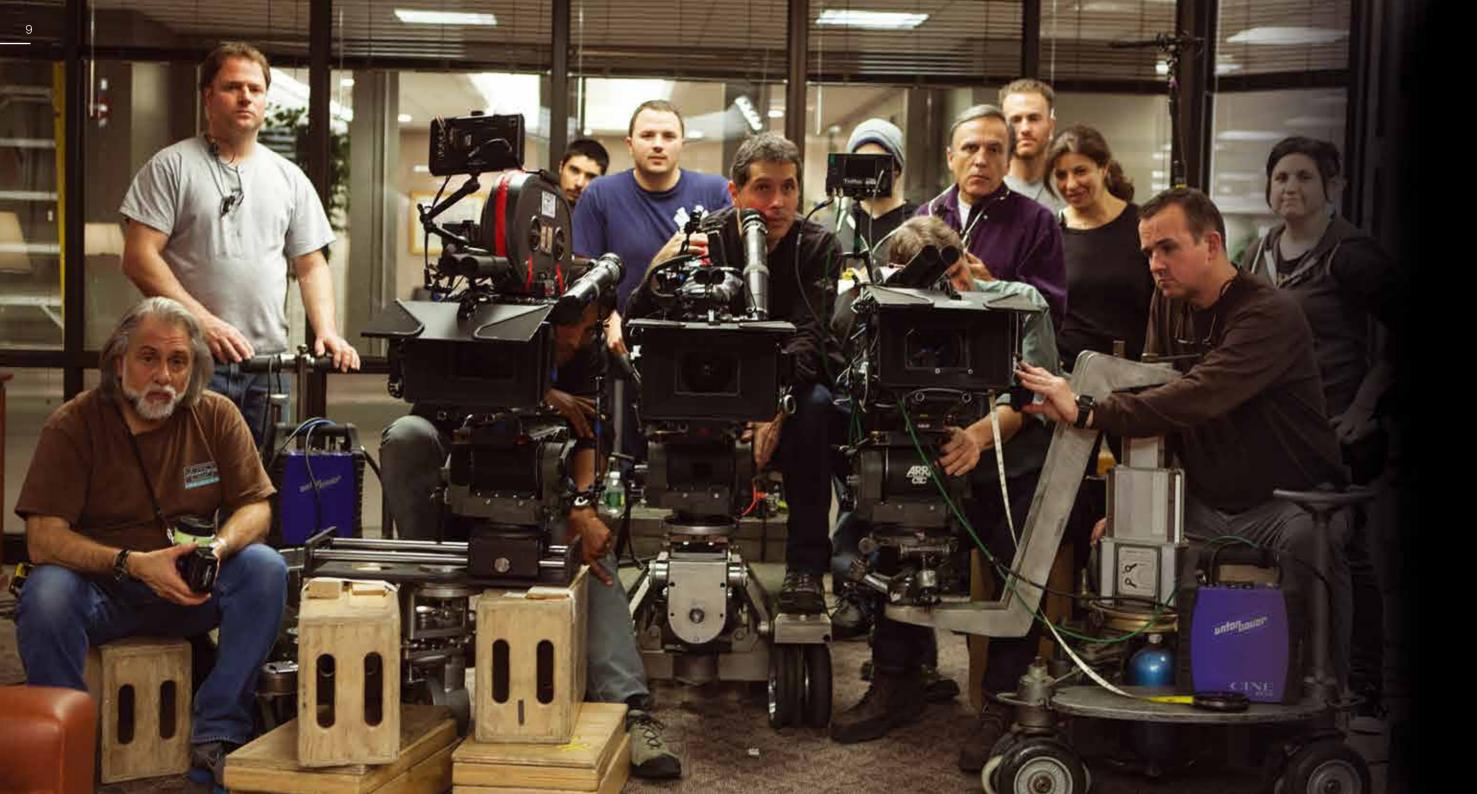
you the confidence to go for it!



## CRESCENZO NOTARILE



Starting out as a photographer, to be behind a camera – any camera – and compose a shot, is an indefinable magical and spiritual feeling. I've been behind an OConnor for about 30 years! On a set, behind an OConnor head with my arms and hands wrapped around it, it's a religious feeling—not a technical skill like with wheels—but a sense of freedom. When you unlock the head, it becomes part of your limbs and reacts intuitively to your sensibilities – all very spontaneously and primal.



# RODRIGO PIETRO



Cinematographer: Rodrigo Pietro The Wolf of Wall Street (Dec 2013), Director: Martin Scorsese

## REED MORANO



When I started using OConnor heads right out of college, I couldn't believe what I had been missing. It allowed me to achieve flawlessly smooth camera moves that were not possible any other way. The combination of perfect balance, freedom of movement and rock solid steadiness is the only thing you can rely on when you have no idea where you're going to have to go with your camera. Every way I've used an OConnor head, even pushing the gear to its limits, it has performed beyond my expectations and has always been effortless to operate.

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#### **ULTIMATE RANGE**

OConnor's Ultimate range of fluid heads feature a stepless, ultra-smooth pan and tilt fluid drag system, specifically designed to provide the ultimate in control and stability for cine-style shooting. Another must-have feature is OConnor's patented sinusoidal counterbalance system for true, accurate balance at any point in the tilt range. Combined, these produce 'the OConnor feel' valued by cinematographers worldwide: smooth, fluid movement and intuitive control.

Because OConnor fluid heads can be counterbalanced down to Olbs., they are the perfect tools for the current art of cinematography, where cameras keep getting lighter, lenses keep getting larger, and accessories are constantly being developed. No matter how a camera setup is configured, OConnor can balance the payload. OConnor design engineers continue to evolve the brand's product line. In the latest Extended Range, the 120EX head supports extra-large payloads, while the 120EXe head's encoding function provides extremely accurate positional metadata for later integration of virtual objects in post production, providing the optimal solution for 3D film production.

OConnor's trusted camera support offering is completed with a wide range of aluminum and carbon fiber tripods that provide the ruggedness, rock-solid stability and high payload capability demanded by top professionals.

#### OCONNOR ADVANTAGES

- Smooth, fluid movement and intuitive control
- True, accurate balance at any point in the tilt range
- Maximum versatility for changing camera setups
- Stepless, ultra-smooth fluid drag system
- High payload capacity and accurate positional data technology ideal for 3D production (120EXe)
- Reliable and tough



# 1030D&1030DS

#### ULTIMATE 1030D & 1030Ds FLUID HEADS

The Ultimate 1030D and 1030Ds fluid heads offer a wealth of features that have been borrowed from the larger OConnor 2575 and 2065 heads to let cinematographers seamlessly transition from heavier to lighter payload camera setups.

These include the stepless, ultra-smooth pan and tilt fluid drag specifically enhanced to provide ultimate control and stability, as well as the patented OConnor Sinusoidal Counterbalance system that provides true, accurate balance at any point in the tilt range. Users will appreciate that the system counterbalances down to zero, a handy advantage considering the trend to lighter weight cameras.

#### Product features

The new ergonomic crank-style counterbalance control simply pulls out of the rear of the head. Plus the Action Brakes for pan and tilt unlock through a single-handed squeeze. And the new sideload platform enables rapid attachment of the camera as well as an extended range of movement for balancing front heavy setups.

For today's versatile shooter, the transition from larger to smaller payloads has never been easier. And most importantly, the famous OConnor feel, remains the same regardless of payload.

The OConnor 1030D supports a payload up to 30 lbs. (13.6 kg) at a 6" (15cm) center of gravity and a +/-90°tilt range. The 1030Ds supports heavier payloads up to 41 lbs. (18.6 kg) at 6" (15cm) COG with a +/- 60° tilt range.

#### Product Specification

Model	1030D	1030DS
Capacity		
@ 4 in. (102 mm) (min)	39 lbs. (17.7 kg)	54 lbs (24.5 kg)
@ 6 in. (152 mm) ± 90°	30 lbs. (13.6 kg)	41 lbs (18.6 kg)
@ 8 in. (203 mm) ± 80°	24 lbs. (10.9 kg)	33 lbs (14.9 kg)
Platform	Sideload	Sideload
Handle(s)	30°	30°
Bases	100mm	100mm
Tilt	+90°/-90°	+60°/-60°
Height	6.6 in. (16.8 cm)	6.6 in. (16.8 cm)
Width	7.6 in. (19.3 cm)	7.6 in. (19.3 cm)
Depth	4.6 in. (11.7 cm)	4.6 in. (11.7 cm)
Weight	8.7 lbs. (3.9 kg)	8.7 lbs. (3.9 kg)

Platforms for 1030D/1030DS		
OConnor Plate		
120 mm Euro Plate		
Panavision Dovetail Plate		
Arri Dovetail Plate		
Arri 24" (60.96 cm) Plate		

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Counterbalances down to zero with an infinitely adjustable, ergonomic crank-style counterbalance control that simply pulls out of the rear of the head.



Sideload platform enables rapid attachment of the camera as well as an extended range of movement for balancing front heavy setups.



Controls located on the left-hand side of the head for intuitive cine-style shooting.



# 2065

#### **ULTIMATE 2065 FLUID HEAD**

The 2065 shares the ergonomic design of OConnor's higher payload fluid heads. Pan and tilt brakes are conveniently located on the left side of the head – so operation is both intuitive and familiar. The platform is equipped with dual scales, one on each side, and four handle rosettes to allow operation from either side of the head as well as front or back handle mounting.

#### **Product features**

A handy one-touch platform release lever enables one finger or hand action to undo the safety catch and open the lever, which speeds deployment and location changes in the field.

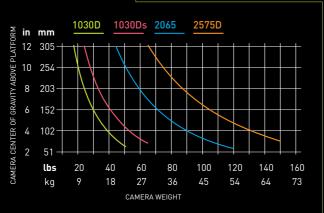
With a greater payload and drag than its predecessor, this new head weighs just 22.9 lbs. (10.4 kg) and has a payload of 0-71 lbs. (32.2 kg). Because OConnor fluid heads can be counterbalanced down to 0 lbs., they are the perfect tools for the current art of cinematography, where cameras keep getting lighter, lenses keep getting larger, and more accessories are constantly being developed. No matter how a camera setup is configured, OConnor can balance the payload.

#### **Product Specification**

apacity	
2 4 in. (102 mm)	89 lbs (40.4 kg)
<sup>®</sup> 6 in. (152 mm)	71 lbs (32.2 kg)
9 8 in. (203 mm)	58 lbs (26.3 kg)
landle(s)	30°
Bases	Mitchell, 150 mm
Tilt .	+90° / -90°
leight	8.4 in. (21.3 cm)
Vidth	12.4 in. (31.5 cm)
Depth	8.6 in. (21.8 cm)
Veight	22.9 lbs (10.4 kg)

Platforms for 2065
OConnor Plate
120 mm Euro Plate
Panavision Dovetail Plate
Arri Dovetail Plate
Arri 24" (60.96 cm) Plate

#### Counterbalance Chart









Platform release lever with a one touch finger actuated a feet precision one "finger" or hand action to undo the safety catch and open the lever.

Stepless, ultra-smooth pan controls located on the left-hand side of the head for intuitive cine-style shooting.







# 2575D

#### **ULTIMATE 2575D FLUID HEAD**

With its famous features the 2575 fluid head has become the standard for film production. The head includes OConnor's patented sinusoidal counterbalance system for true, accurate balance at any point in the tilt range. Add to this OConnor's stepless, ultra-smooth pan & tilt fluid drag, and you've got ultimate control and stability for film style shooting.

#### **Product features**

As the next generation head of the highly successful 2575 series, the 2575D retains a large number of features and functions from the older heads but includes many new features:

- > Platform controls on the operator's side of the head
- > Platform release lever with a one touch finger actuated safety release catch - allowing for one "finger" or hand action to undo the safety catch and open the lever
- > Dual platform scales Platform with 4 handle rosettes Soft hand rest on left hand side

#### **Product Specification**

Capacity	
@ 4 in. (102 mm)	133 lbs (60.5 kg)
<sup>®</sup> 6 in. (152 mm)	105 lbs (47.7 kg)
@ 8 in. (203 mm)	87 lbs (39.5 kg)
landle(s)	30°
Bases	Mitchell, 150 mm
Tilt .	+90° / -90°
leight	8.4 in. (21.3 cm)
Width	12.4 in. (31.5 cm)
Depth	8.6 in. (21.8 cm)
Weight	22.9 lbs (10.4 kg)

Platforms for 2575D	
OConnor Plate	
120 mm Euro Plate	
Panavision Dovetail Plate	
Arri Dovetail Plate	
Arri 24" (60.96 cm) Plate	

# Counterbalance Chart We in mm 1030D 1030Ds 2065 2575D 10 254 8 203 10 254







Infinitely adjustable counterbalance from 0-90lbs, altered easily with a collapsible counterbalance crank knob and numerical readout.



Platform release lever with a one touch finger actuated safety release catch – allowing for one "finger" or hand action to undo the safety catch and open the lever.



oconnor

oconnor

Stepless, ultra-smooth pan & tilt fluid drag.

# 120EX

#### EXTENDED CAPACITY 120EX FLUID HEAD

Industry leading cinematographers are turning to the OConnor 120EX head. With the smooth OConnor feel and infinitely adjustable control, this patented head is the only product on the market to balance the huge capacity range of 30 – 240 lbs (14 – 109 kg).

#### **Product features**

OConnor's fluid heads are famous for ultimate control and stability for film style shooting. With the use of EX-technology OConnor can offer the features it has become famous for while offering an additional benefit: extended capacity. With a patented stepless counterbalance mechanism at the heart of EX-technology, the 120EX can be boosted into EX-mode to achieve a whole new realm of support. Getting more than 100%! This is the best way to describe the EX-Mode.

The 120EX head has a given payload capacity of 120 lbs (54 kg) for the ±90° tilt range. With traditional counterbalance mechanisms any payload heavier than this maximum weight can't be balanced. Not with the 120EX.

EX fluid heads can go far beyond their maximum payload by slowly limiting tilt range as the payload is increased. The maximum payload is reached at a tilt range of  $\pm 60^{\circ}$ , which for the 120EX is an incredible 240 lbs (109 kg) based on a 8" center of gravity.

Have the freedom to create with even the largest lens: choose the 120EX.

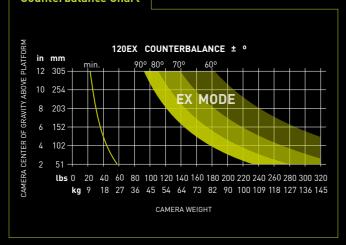
#### **Product Specification**

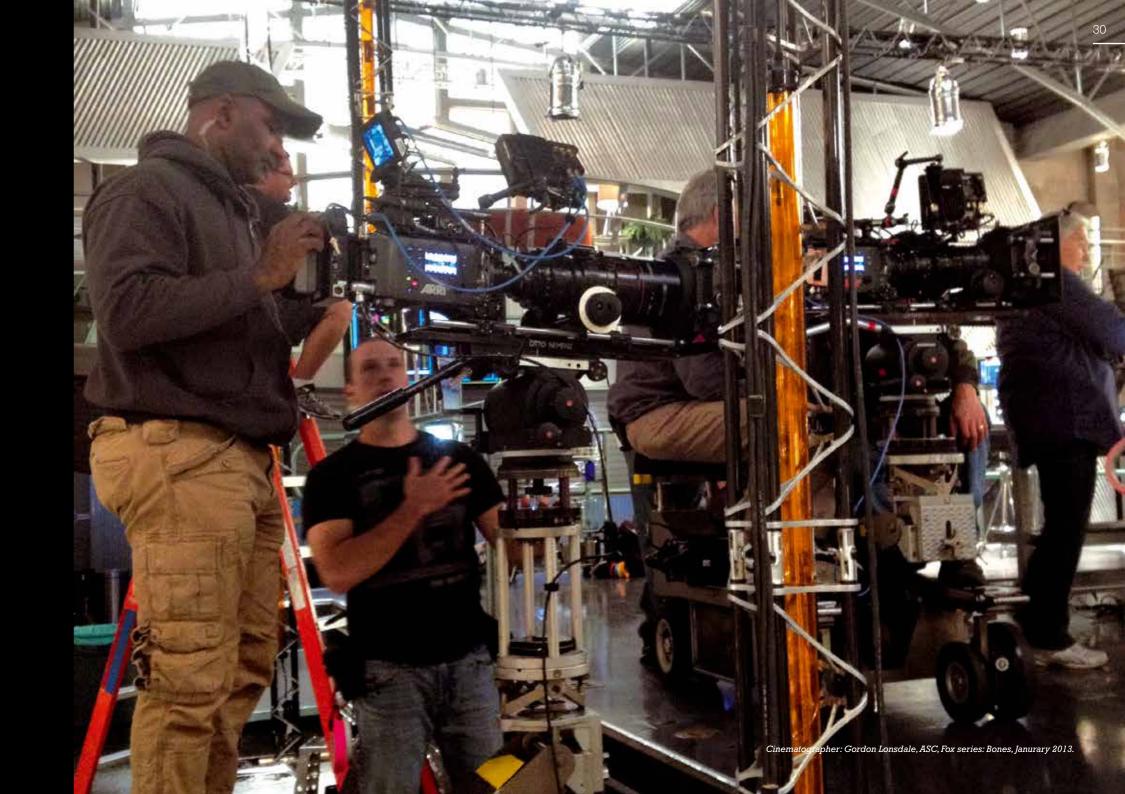
Capacity	
@ 8 in. min.	30 lbs (14 kg)
@ 8 in. ± 90°	120 lbs (54 kg)
@ 8 in. ± 80°	147 lbs (67 kg)
@ 8 in. ± 70°	188 lbs (85 kg)
@ 8 in. ± 60°	240 lbs (109 kg)
Handle(s)	30°
Bases	Mitchell
Tilt	+90° / 90°
Height	9.8 in. (24.8 cm)
Width	13.5 in. (34.3 cm)
Depth	10.5 in. (26.6 cm)
Weight	34.1 lbs (15.5 kg)

Platforms for 120EX		
OConnor Plate		
OConnor Geared Plate		
120 mm Euro Plate		
Panavision Dovetail Plate		
Arri Dovetail Plate		
Arri 24" (60.96 cm) Plate		

A version of this head with high resolution rotary encoders on both pan and tilt axis (the 120EXe) is also available.

#### **Counterbalance Chart**











A collapsible counterbalance crank knob and digital readout make counterbalancing the payload easy - even though the range is huge.

The new easy-to-use sideload mechanism features a push and turn platform knob to easily and precisely adjust the platform fore and aft.





#### PRODUCT RANGE OVERVIEW



Ultimate 1030D Fluid Head for cameras up to 30 LBS (13.6 kg) & 1030DS for cameras up to 41 LBS (18.6 kg)



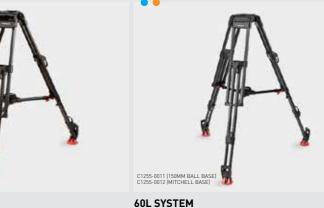
Ultimate 2065 Fluid Head





TRIPOD SYSTEMS









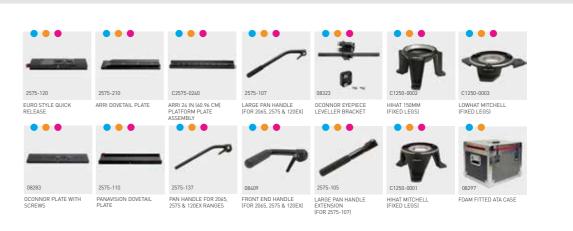


CINE HD

CINE HD BABY













The 30L carbon fiber tripod OConnor replaces the legacy 25L and 35L lines of tripods. Combining the benefits of new-age materials with precision engineering we have created a support system which is both lightweight, yet solid and stable, an ideal fit for the new generation of smaller new Ultimate 1030D & 1030Ds fluid heads. The 30L tripod is included in our 1030D/1030DS tripod system packages.



## 60L CARBON FIBER

The new OConnor 60L carbon fiber tripod offers a superior lightweight support option for the OConnor Ultimate 2065 and 2575D fluid heads. The tripod combines the benefits of new-age materials with precision engineering to provide a support system that is lighter weight with fast setup features, yet solid enough to carry large film camera configurations.



# CINE HD

The CINE HD & CINE HD BABY tripod is the perfect choice for heavy payloads that must be supported in a safe and reliable manner.





# O-BOX WM MATTEBOX SYSTEM

This precision mechanical device adeptly accepts up to three filters: two in top-loading filter frames (two 4x4" and two 4x5.65" frames are included). The rear frame is rotatable 360 degrees. A third 138mm round filter sleekly fits in the bellows. Constructed of OConnor's proprietary rugged composite, the sunshade is lightweight yet substantially stronger and more impact resistant than existing units. The O-Box WM is the first commercially produced mattebox to have integrated handgrip interfaces.





# CFF-1 CINE FOLLOW FOCUS ONE

The Cine Follow Focus CFF-1 represents the pinnacle of follow focus design and technology, offering unparalleled performance. Its multifunctional design has a single bridge that clamps effortlessly onto either 15mm or 19mm studio rod systems and a swing arm that can be mounted on either side of the bridge for maximum versatility. What's more, OConnor's unique main follow focus bridge slides independently of the support bridge dovetail, increasing mounting options for specialty setups. The CFF-1 Minimal Backlash Mechanism guarantees an exacting focus pull with less play and higher accuracy; every time.





### O-FOCUS DM DUAL MINI

Designed to meet the exacting needs of professional camera operators and assistants, the OConnor O-Focus Dual Mini is a compact, double-sided direct drive follow focus unit. Available in a Photo Set with a 1:0.75 transmission ratio optimized for still photo lenses and hard stops for lenses with unlimited rotation, or in a Cine Set with a 1:1.4 output transmission ratio well suited for cine lenses with an expanded focus scale.





# O-GRIPS HANDGRIP SYSTEM

Constructed with a solid titanium core for extreme durability and reliability, O-Grips feature smooth-functioning, single-handle ball joints with a maximum payload capacity of 44 lbs (20 kg) – making them ideal for work with both smaller and larger cameras. These are the first professional camera handgrips capable of fitting all three standard rod systems (15mm and 19mm Studio, and 15mm LWS) via the single, easy to use O-Grips bridge. OConnor O-Grips can be used with all common camera configurations.





### UNIVERSAL BASEPLATE

The OConnor Universal Camera Baseplate is designed to adapt small to medium size digital cine cameras (with on-center mounting threads) to the thousands of standard professional accessories available in the industry. It provides a sturdy camera platform that is engineered to allow optical axis centering of the lens to the correct rod measurement, and the ability to interface with standard studio bridgeplates for setups where large and weighty zoom lenses require rock solid support.





**EPARATELY** 

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**AVAILABL** 

ACCESSORIES

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#### LENS AND CAMERA ACCESSORIES OVERVIEW



15MM LWS SYSTEM - NEEDS ADDITIONAL ITEMS MARKED IN BLACK

√ 15 & 19MM STUDIO ROD SYSTEM













C1244-0001 O-GRIPS SINGLE JOINTED SET C1244-0002 O-GRIPS DOUBLE JOINTED SET C1244-0003 O-GRIPS DELUXE SET

15MM LWS SYSTEM

O-GRIPS HANDGRIP SYSTEM





OConnor's growing line of camera and lens accessories engineered to fill the needs of today's fast-paced camera work.

FORMS FOR FOLLOW FOCUS KITS

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Total support for professionals

Film-makers know from experience that our products are synonymous with quality craftsmanship, innovative features, reliability and toughness, for professional results. Our leading brands like OConnor, inventor of the fluid head and Litepanels, pioneer of professional LED lighting equipment, continue to introduce new and exciting products that change the way industry professionals work.









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#### oconnor

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