

Studio/OB Pan and Tilt Heads



"I have not seen another piece of equipment perform as **flawlessly** as the Vinten Vectors."

Paul Maibaum, ASC
Director of Photography



Vinten's Thin Film (TF) Drag Technology

Vinten patented TF drag system is designed to offer **complete control** at any level of movement, allowing you to concentrate on achieving the best possible filming. The high levels of control allow you to work without compromise delivering **smooth movement** in any situation.

TF drag

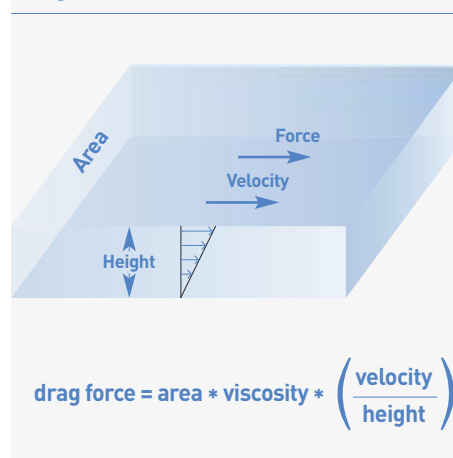
Vinten's TF (thin film drag) is a true fluid drag in the purest terms. Utilising the unique properties of a proprietary fluid TF drag provides smooth predictable resistance over a wide variety of levels and temperatures.

TF drags are constructed of multiple rotating plates alternating with static plates surrounded in the fluid which is vacuum filled to eliminate all air from the drag. The plates do not contact each other but are separated only by a thin film of the special fluid. When the head is moved the rotating plates move relative to the static plates creating a velocity profile shearing the fluid leading to drag (fig 1.0).

of the plates is equal to the fluid drag at this speed but does not increase as motion speed increases. This results in a smooth transition to almost constant drag force regardless of velocity (above the threshold) and the perfect whip pan.

- **Continuous, infinite drag adjustment control** allows you work without compromise delivering smooth movement in any situation
- **An extensive range of drag** from exceptionally light to exceptionally heavy allowing the camera to work in tune with you
- **A wide operating temperature** range from -40°C to $+60^{\circ}\text{C}$ means you can use the pan and tilt heads in a wide range of environments with uncompromising performance guaranteed
- **Outstanding** whip pan control

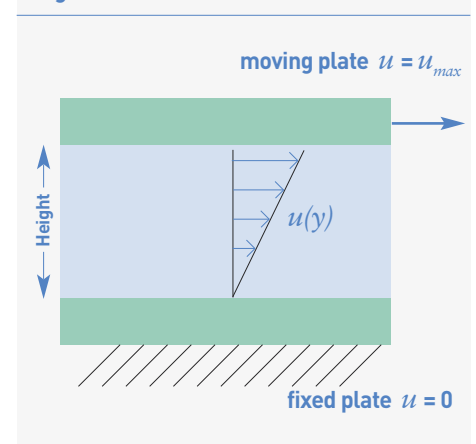
Fig 1.0



Drag level is infinitely adjustable by varying the area of overlap between the static and rotating plates.

At low to moderate speeds the fluid is in laminar flow and the separation of the plates (h) is constant yielding an evenly increasing level of drag with fluid velocity (u). As the pan (or tilt) motion speed crosses into the "whip pan" region the flow of fluid between the static and moving plates becomes sufficiently fast for the Bernoulli Effect to reduce the fluid pressure between the plates drawing them together the coefficient of lubricated friction

Fig 1.1



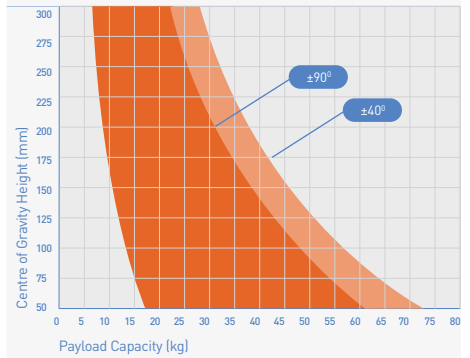
As soon as the motion speed is reduced below the level required for the plates to be deflected the fluid returns to the void between the plates and normal fluid drag is restored.

Vector 430 & 430S



The Vector 430 head offers a single choice when previously two heads were required.

Balance Chart



Above: The Vector 430/430S offers $\pm 90^\circ$ tilt across a wide payload range.

Specification:

Vector 430 Part No: V4006-0001
Vector 430S Part No: V4006-0002

- 22.7cm / 8.9"
- 20.6cm / 8.1"
- 28.5cm / 11.2" without pan bar
- 12.1kg / 26.7lbs
*including wedge adaptor & pan bar
- 10 to 43kg / 22 to 94.8lbs

Tilt Range:

- @ 37kg / 81.6lbs: $\pm 90^\circ$
- @ 43kg / 94.8lbs: $\pm 40^\circ$

Platform Adjustment: +5.5 to -10.6cm / +2.2 to -4.2"

Pan Bar: Single telescopic

Camera Fixing: EFP Quickfit Automatic Adaptor [3761-3]

Levelling Bubble: Illuminated

Drag Knobs: Backlit and calibrated

Counterbalance: Fully variable with digital readout

Colour: Black

Specification V4006-0001

Base fixing: 4 bolt flat with Quickfix groove

Specification V4006-0002

Base fixing: 150 mm ball base

Vector 430/430S designed to **Perfectly balanced** applications that use both the compact box lens and large EFP barrel lenses.

This unique design has enabled Perfect Balance to be incorporated into a previously unattainable **compact and lightweight** package whilst providing an **extremely large capacity range** of 10 to 43kg / 22 to 94.8lbs. This means that the Vector 430/430S offers a single choice when previously two heads were required.

Simple to rig and convenient to transport, the compact design of the Vector 430/430S maintains the functionality associated with Vinten's renowned Vector heads, including infinitely adjustable Perfect Balance and smooth TF drag technology.

Ergonomically designed controls, including a retractable counterbalance adjuster, backlit drag knobs and illuminated LCD display, ensure ease of use in any situation, while the base of the Vector 430 includes an integral Quickfix groove for fast and secure attachment. These features combined with a Quickfit wedge adaptor make the Vector 430 the perfect choice for busy multi-camera productions.

Watch the video:
4 steps to setting up Perfect Balance



Vector 75



Vector 75 combines the original Vector 70 LF fluid drag system, with operational enhancements from the **class-leading** Vector 750. The design retains that familiar Vector feel, without compromising any aspect of camera control.

Incorporated in the Vector 75 is a range of features which address the pressures of today's fast paced and cost conscious production company. This includes smooth operation in both pan and tilt movements with infinite adjustability for both the Perfect Balance and LF drag system. This ensures high levels of control and **exceptionally smooth movement** in any situation.

The Vector 75 features a centre of gravity range of 8 to 25cm / 3.1 to 9.8" and a maximum payload capacity of 75kg / 165.3lbs ensuring a wide range of camera and accessory combinations can be accommodated.

Like the Vector 750, the Vector 75 employs a unique counterbalance mechanism that does not use springs or cams. Instead a system of mechanical linkages balances cameras with various centre of gravity points, making adjustment simple and eliminating the need for time-consuming cam changes when altering the camera configuration.






Functionality and **durability** incorporated into one versatile product.



Above: High contrast blue LED level bubble illumination

Specification:

Part No: V4095-0001

-  25.5cm / 10"
-  35.5cm / 14"
-  35cm / 13.5" without pan bar
-  18.6kg / 41lbs
*including wedge adaptor & pan bar
-  75kg / 165.3lbs

Tilt Range:	±52°
@ 75 kg / 165.3 lbs:	
Platform Adjustment:	33 cm / 13 "
Pan Bar:	Single telescopic
Camera Fixing**:	Wedge adaptor
Levelling Bubble:	Illuminated
Base fixing:	4 bolt flat with Quickfix groove
Colour:	Black

** Wedge plates not included
Standard wedge part no: 3053-3: (page 50)

Vector 750



Functionality and **durability** incorporated into one versatile product.

Below: 75kg maximum payload



Building on the legacy of the **legendary** Vector 700, the Vector 750 offers enhanced durability and increased payload.

Like the acclaimed Vector 700, the Vector 750 uses a unique counterbalance mechanism that does not use springs or cams. Instead a system of mechanical linkages balances cameras with various centre of gravity points, making adjustment simple and eliminating the need for time-consuming cam changes when altering the camera configuration.

The Vector 750 features a centre of gravity range span of 8 to 25cm / 3.1 to 9.8". This covers the full centre of gravity of both the Vector 700 models, creating a **broad range** of product capability and making product selection much easier. In addition the Vector 750 has a maximum payload of 75kg / 165.3lbs, allowing a greater use of camera accessories such as talent monitors and spotlights. A monitor bracket is available as an optional accessory. The inclusion of some additional robust internal components makes the Vector 750 even more **durable**.

The Vector 750 retains all of the excellent, proven operational features of the Vector 700 including smooth operation in both pan and tilt movements with infinite adjustability for both the Perfect Balance and TF drag system. This ensures high levels of control and exceptionally smooth movement in any situation.

Specification:

Part No: V4034-0001

- ⊕ 25.5cm / 10"
- ⊖ 35.5cm / 14"
- ⊙ 35cm / 13.5" without pan bar
- ⊕ 19.2kg / 42.3lbs
*including wedge adaptor & pan bar
- ⊕ 75kg / 165.3lbs

Tilt Range: @ 75kg / 165.3lbs: ±52°
 Platform Adjustment: 33cm / 13"
 Pan Bar: Single telescopic
 Camera Fixing**: Wedge adaptor
 Levelling Bubble: Illuminated
 Base fixing: 4 bolt flat with Quickfix groove
 Colour: Black

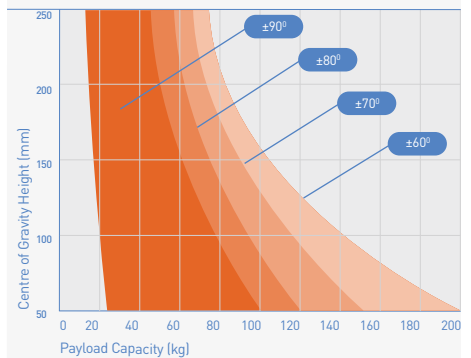
** Wedge plates not included
 Standard wedge part no: 3053-3 (page 50)

Vector 950



The **compact** and durable Vector 950 head uses TF drag for **enhanced control**.

Balance Chart



The Vector 950 capacity is **up to 120kg** and at this payload provides $\pm 60^\circ$ of perfectly balanced tilt, allowing the safe control of today's long OB lenses and large 3D rigs.

The Vector 950 features TF Drag, allowing outstanding whip pan control and an extensive operational temperature range from -40°C through to $+60^\circ\text{C}$. The high output tilt drag modules also provide superb holding force and enhanced control in windy conditions. Combining these characteristics with infinite Perfect Balance adjustment ensures that the effort needed to control the effect of a heavy, moving camera payload remains **constant** and **predictable**, eliminating a major distraction during filming.



The compact and durable Vector 950 head incorporates a wealth of features. Set-up is aided through the inclusion of a tilt deadlock, Quickfix groove in the base, retractable carry handle and illuminated controls, as well as an LCD display that offers a counterbalance readout that can be set for known payloads. The pan and tilt brakes are positioned at the rear of the head, making them easily accessible, and the camera plate can be simply adjusted forward and back using a retractable, ergonomically designed adjuster.

Specification:

Part No: V3996-001

- 24.8cm / 9.8"
- 22.5cm / 8.9"
- 34.2cm / 13.5" without pan bar
- 16.6kg / 36.6lbs
*including wedge adaptor & pan bar
- 16 to 120kg / 35.3 to 264.5lbs

Tilt Range:

@ 60kg / 132.3lbs: $\pm 90^\circ$

@ 120kg / 264.5lbs: $\pm 60^\circ$

Platform Adjustment: +5.5 to -12.5cm / +2.2 to -4.9"

- Pan Bar: Single telescopic
- Camera Fixing**: Wedge adaptor
- Levelling Bubble: Illuminated
- Drag Knobs: Backlit and calibrated
- Counterbalance: Fully variable with digital readout
- Base fixing: 4 bolt flat with Quickfix groove
- Colour: Black

** Wedge plates not included Standard wedge part no: 3053-3 (page 50)