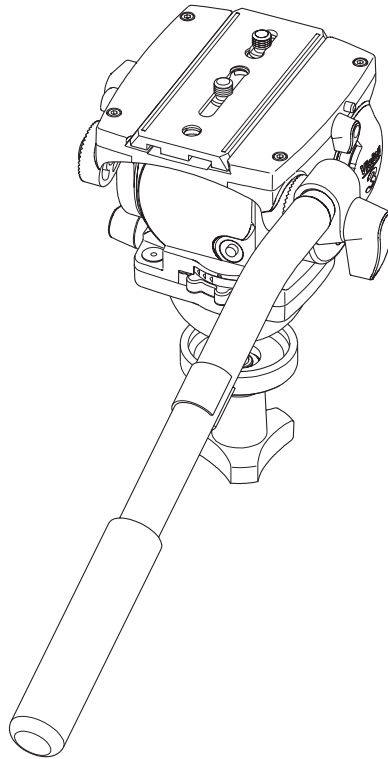


# Operators Guide

## Vision 3



## Pan & Tilt Head



***Vinten***  
Camera Control Solutions

---

# **Vision 3**

## **Pan and Tilt Head**

**Publication Part No. 3543-8      Issue 4**

Copyright © Vinten Broadcast Limited 2004

All rights reserved throughout the world. No part of this document may be stored in a retrieval system, transmitted, copied or reproduced in any way including, but not limited to, photocopy, photograph, magnetic or other record without the prior agreement and permission in writing of  
Vinten Broadcast Limited.

Vinten and Vision are registered trademarks of Vinten Broadcast Limited.

---

---

## Safety - read this first

### Warning Symbols in this Operators Guide



Where there is a risk of personal injury, injury to others, or damage to the pan and tilt head or associated equipment, comments appear, highlighted by the word **WARNING!** and supported by the warning triangle symbol.

## Technical data

### Weight

Head	2.3 kg (5.0 lb)
Pan bar	0.2 kg (0.4 lb)
Bowl clamp	0.14 kg (0.3 lb)
Height to mounting face	12.1 cm (4.76 in.)
Length	12.9 cm (5.08 in.)
Width	14.8 cm (5.83 in.)
Load capacity	Up to 10 kg (22 lb), dependent on spring fitted
Tilt range	±90°
Pan range	360°
Tripod fixing	75 mm ball

## Further information

For further information or advice regarding this pan and tilt head, please contact Vinten Broadcast Limited, your local Vinten distributor (see back cover) or visit our website.

For full details on maintenance and spare parts, please refer to the Vision 3 Pan and Tilt Head Maintenance Manual and Illustrated Parts List (Publication Part No. 3543-9) This is obtainable from Vinten Broadcast Limited or your local Vinten distributor. For information on-line, visit our website at

**[www.vinten.com](http://www.vinten.com)**

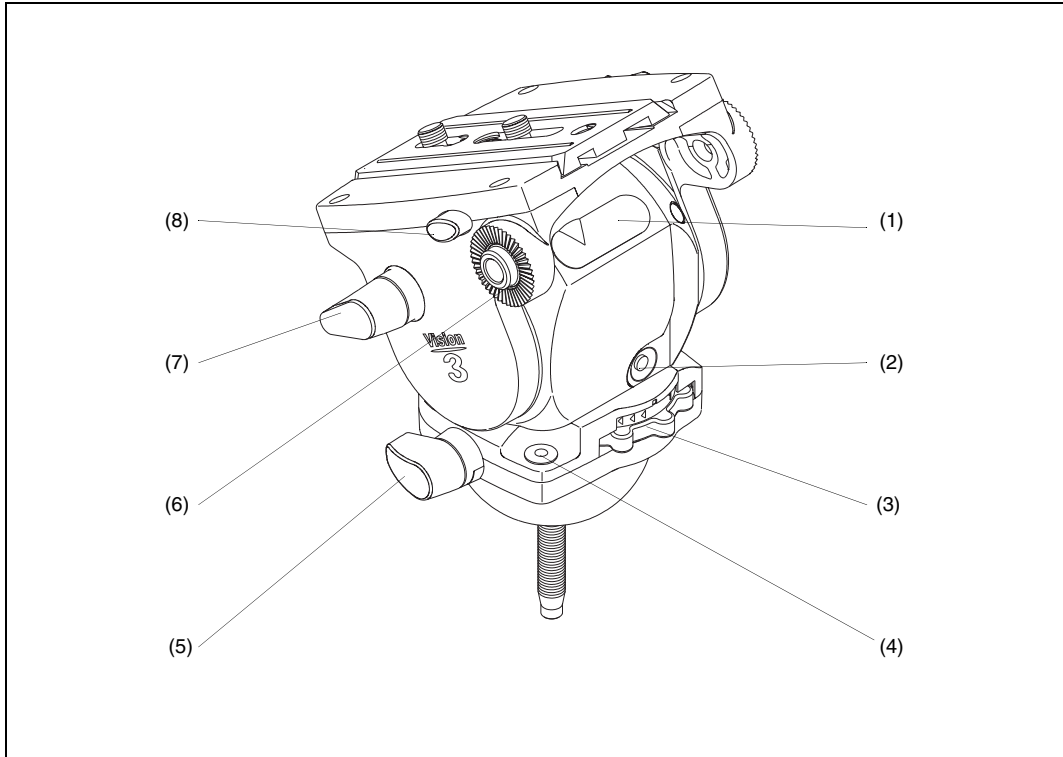
---

# Contents

	Page
<b>Safety - read this first</b> .....	3
<b>Technical data</b> .....	3
<b>Further information</b> .....	3
<b>Introduction</b> .....	7
<b>Operation</b>	
Installing the head on a tripod .....	8
Mounting the camera .....	9
Checking the camera balance .....	9
Pan and tilt brakes .....	10
Pan and tilt drag .....	10
<b>Servicing</b>	
Routine maintenance .....	11
Cleaning .....	11
Battery replacement .....	11
Brake knob and drag control knob adjustment .....	12
Changing the balance spring .....	13
<b>Parts list</b> .....	15

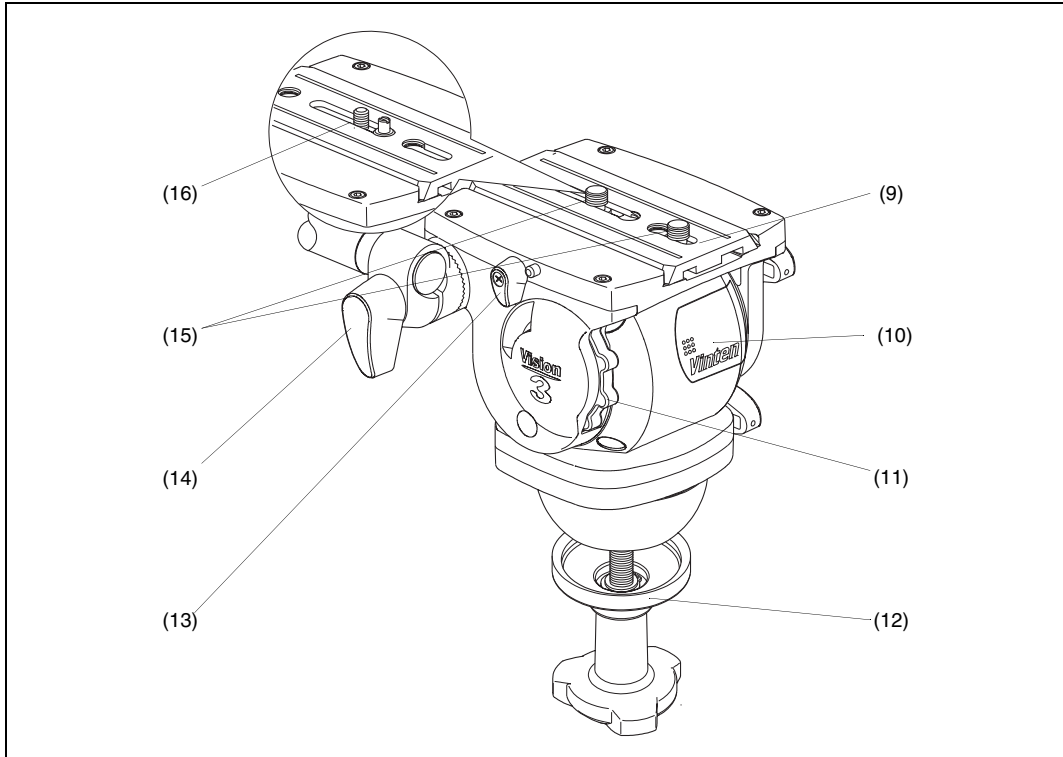
## Associated publication

Vision 3 Pan and Tilt Head  
Maintenance Manual  
Publication Part No. 3543-9



**Vision 3 (Left-Hand Side)**

- |     |                                     |
|-----|-------------------------------------|
| (1) | Battery compartment                 |
| (2) | Switch for illuminated level bubble |
| (3) | Pan drag adjustment knob            |
| (4) | Illuminated level bubble            |
| (5) | Pan brake knob                      |
| (6) | Pan bar mounting                    |
| (7) | Tilt brake knob                     |
| (8) | Slide lock release                  |



### Vision 3 (Right-Hand Side)

(9)	Slide plate
(10)	Spring cover plate
(11)	Tilt drag adjustment knob
(12)	Bowl clamp
(13)	Slide plate clamp
(14)	Pan bar
(15)	3/8 in. Camera mounting screws
(16)	VHS Adaptor

---

## Introduction

The Vision 3 pan and tilt head embodies LF drag assemblies for pan and tilt motions and an adjustable camera mounting plate. It is available in different balance spring configurations, which enables it to balance a wide range of cameras.

Both the pan and tilt mechanisms incorporate the patented Vinten lubricated friction (LF) system to ensure smooth movement of the camera about these axes and are fitted with control knobs (3) (11) to adjust the drag setting.

The whip-pan facility is unaffected by the pan drag setting.

Friction brakes on each axis allow the head to be locked at any chosen position. The operating knobs for both brakes (5)(7) are fitted at the left-hand side of the head.

An illuminated level bubble (4) is fitted to the rear of the head. When the switch (2) is pressed, the bubble will be illuminated for approximately 15 seconds. The battery for the illuminated bubble is contained in a battery compartment (1).

Pan bar mounting points (6) are located at the rear of the head, on either side of the camera mounting platform. The pan bar is attached using a pan bar clamp, with angular adjustment available on the mount serrations. A fixed pan bar (14) is supplied. A second pan bar may be fitted.

The camera is attached to the head by means of a slide plate (9) and 3/8 in. screws (15) or the VHS adaptor (16) (see **Mounting the camera**). A clamp (13) is provided to hold the slide plate in position and a lock (8) prevents its inadvertent removal from the head.

---

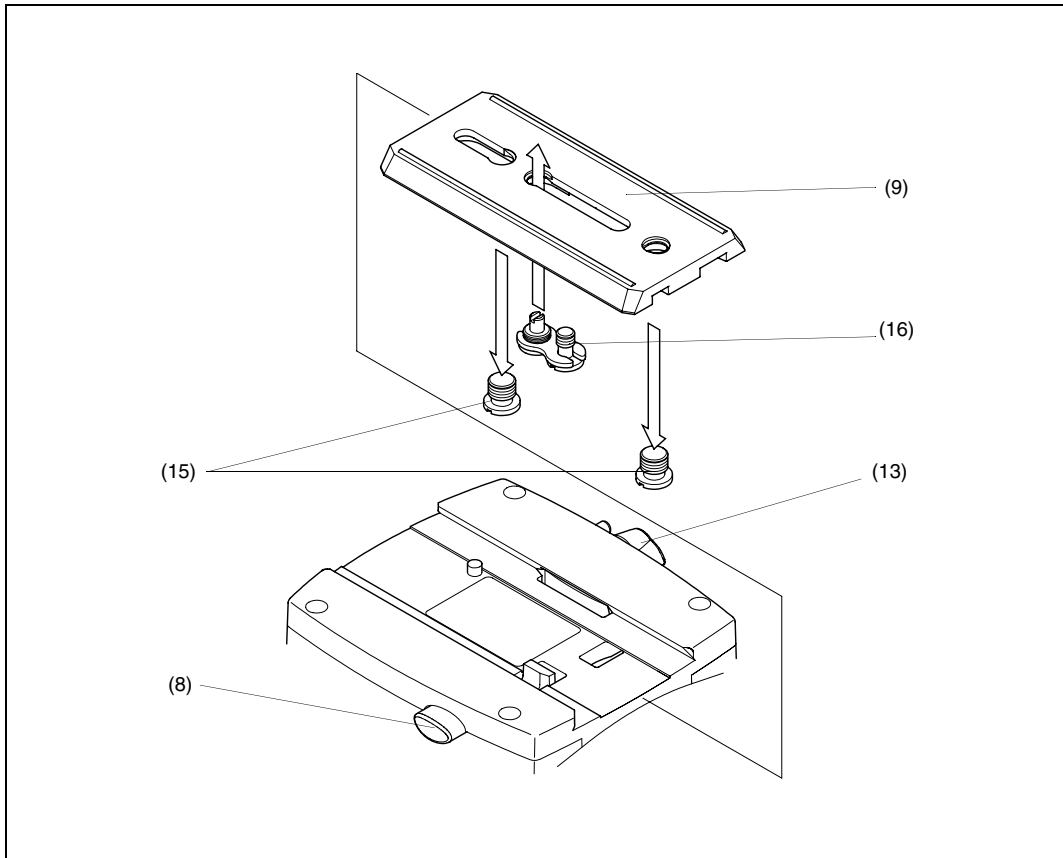
## Operation

### Installing the head on a tripod

The Vision 3 pan and tilt head is supplied with an integral 75 mm ball mount, designed for installation on a compatible Vinten Vision tripod.

Adaptors are available which enable the head to be installed on tripods or pedestals fitted with other mountings. These are listed under [Optional accessories - tripod and pedestal adaptors](#).

To install the head, remove the bowl clamp assembly (12) from the head, position the head on the tripod and refit the bowl clamp assembly from below. Level the head with the aid of the level bubble (4) and tighten the bowl clamp. The level bubble may be illuminated by pressing the switch (2). The light will extinguish after approximately 15 seconds.



**Mounting the camera (VHS adaptor)**

---

## Mounting the camera

### Mounting the camera (3/8 in. mounting screws)

Remove the slide plate (9) from the head by releasing the slide plate clamp (13), pressing the slide lock release (8) and pulling the plate out to the rear.

Attach the slide plate to the camera or camera mounting plate under the approximate centre of the camera's weight using both mounting screws (15).

Set the platform level and apply both the pan and tilt brakes (5)(7).

Push the slide plate and camera into the track in the platform, ensuring the slide lock release (8) snaps into position.

Check the balance of the camera (see [Checking the camera balance](#)).

### Mounting the camera (VHS adaptor)

The VHS adaptor (16) consists of a VHS pin and a 1/4 in. BSW camera mounting screw connected by a plastic link.

To mount the camera using the VHS adaptor, proceed as follows:

Remove the slide plate (9) from the head by releasing the slide plate clamp (13), pressing the slide lock release (8) and pulling the plate out to the rear.

Remove the two 3/8 in. BSW camera mounting screws (15) from the slide plate.

Position the VHS adaptor (16) in the longer slot in the slide plate, with the pin facing forwards. Screw the pin securely into the slide plate.

Secure the slide plate to the camera with the 1/4 in. BSW camera mounting screw, ensuring the pin engages in the hole in the camera.

Set the platform level and apply both the pan and tilt brakes (5)(7).

Push the slide plate and camera into the track in the platform, ensuring the slide lock release (8) snaps into position.

Check the balance of the camera (see [Checking the camera balance](#)).

## Checking the camera balance

The Vision 3 pan and tilt head is available in different balance spring configurations, which enables it to balance a wide range of cameras.

Check the camera balance as follows, remembering to ensure that the pan bar(s) and any ancillary equipment have been fitted:

---

**NOTE:** Be prepared to prevent the head falling away suddenly.

---

Reduce tilt drag (11) to minimum.

Release the tilt brake (7).

---

---

Position the camera correctly on the head by releasing the slide plate clamp (13) and sliding the camera backwards or forward until it balances horizontally. Apply the slide plate clamp (13).

Using the pan bar, tilt the head backwards and forwards. If the head tends to fall away, a stronger spring should be fitted. If the head tends to spring back, a weaker spring should be fitted (see [Changing the balance spring](#)).

## Pan and tilt brakes

Friction brakes on each axis allow the head to be locked at any chosen position. The operating levers for the pan brake (5) and tilt brake (7) are fitted at the left-hand side of the head.

To apply the brake, turn the lever fully clockwise. To release the brake, turn the lever fully counter-clockwise.



**WARNING!** When the brakes are not in use, always turn the levers fully counter-clockwise.  
**DO NOT** use the brakes to supplement drag.

---

## Pan and tilt drag

Both the pan and tilt mechanisms incorporate the Vinten LF system to ensure smooth movement of the camera about these axes and are fitted with control knobs to adjust the drag setting.

The pan drag adjustment knob (3) is rear of the head, the tilt drag knob (11) is on the right-hand side. The whip-pan facility is unaffected by the pan drag setting.

Both drag knobs are provided with graduated scales. To increase drag, turn the knob towards a higher graduation. To decrease drag, turn the knob towards a lower graduation.

---

**NOTE:** Reduce drag to a minimum when the head is out of use for long periods.

---

---

# Servicing

## Routine maintenance

During use, check the following:

- Check the illumination of the level bubble. Replace battery if necessary.

- Check the effectiveness of the pan and tilt drag controls. Reset as necessary.

- Check the effectiveness of the pan and tilt brakes. Reset as necessary.

No further routine maintenance is required.

## Cleaning

During indoor use, the only cleaning required should be a regular wipe over with a lint-free cloth. Dirt accumulated during storage may be removed using a semi-stiff brush. Particular attention should be paid to the levelling bowl and mounting face of the head and to the space between the tilting assembly and the base.

All Vision heads are weatherproof. However, use out-of-doors under adverse conditions will require special attention. Salt spray should be washed off with fresh water at the earliest opportunity. Sand and dirt acts as an abrasive and should be removed using a semi-stiff brush or vacuum cleaner

---

**NOTE:** Use only detergent-based cleaners. DO NOT use solvent- or oil-based cleaners, abrasives or wire brushes to remove accumulations of dirt, as these damage the protective surfaces.

---

## Battery replacement

The battery illuminates the level bubble (4) when the switch (2) is pressed. The level bubble remains lit for approximately 15 seconds.

The battery should be replaced yearly or whenever the illumination is considered inadequate.

To replace the battery:

- Tilt the head forwards to allow access to the battery cover (1) and apply the tilt brake (7).

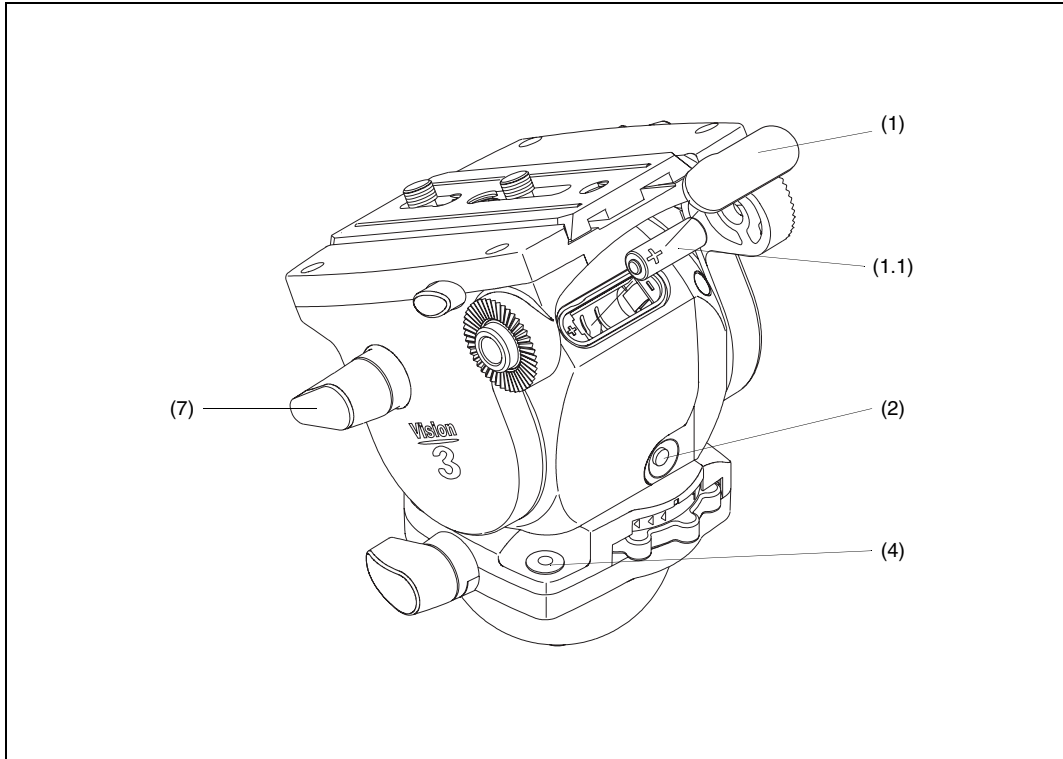
- Using a thin-bladed screwdriver or similar tool, prise off the battery cover (1).

- Pull the battery (1.1) out of the battery compartment.

- Push the replacement battery into the battery compartment, observing the correct polarity.

- Refit the battery cover (1).

- Press the switch (2) and ensure that the level bubble (4) is lit for approximately 15 seconds.



## Battery replacement

### Brake knob and drag control knob adjustment

The pan and tilt brake and drag controls may require adjustment after prolonged use. These adjustments should be carried out by competent persons as detailed in the Maintenance Manual. The Maintenance Manual may be obtained from Vinten Broadcast Limited or your local Vinten distributor or from our website at [www.vinten.com](http://www.vinten.com).

---

## Changing the balance spring

The Vision 3 pan and tilt head is available in different balance spring configurations, which enables it to balance a wide range of cameras.

If the head tends to fall away when tilted, a stronger spring should be fitted. If it tends to spring back, a weaker spring should be fitted.

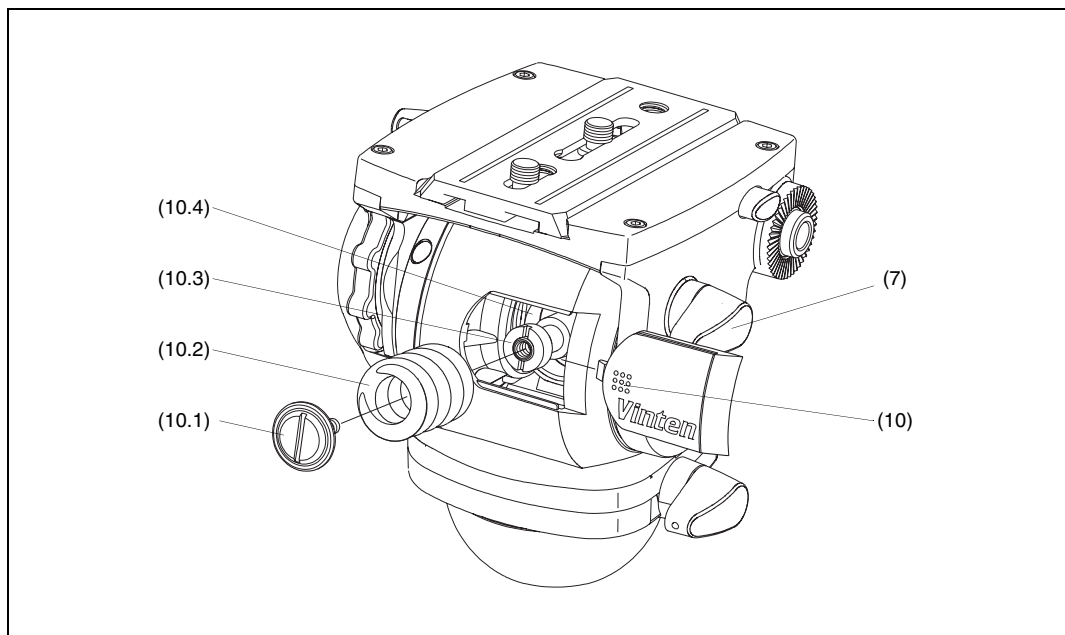
For advice on the spring for a particular camera, please contact Vinten Broadcast Limited or your local distributor, or visit our website at [www.vinten.com](http://www.vinten.com).

Spring strength is indicated by a number and colour, as follows:

**weakest**

1	Silver
2	Grey
5	Green
8	Red
9	Black
10	Yellow

**strongest**



## Changing the balance spring

---

To replace the balance spring:

Tilt the head to gain access to the spring cover plate (10) and apply the tilt brake (7).

Press down on the dimpled area of the spring cover plate (10) and slide it off.

Release the tilt brake and tilt the head to gain access to the spring end cap (10.1). Unscrew the cap using a suitable screwdriver, coin or similar.

---

**NOTE:** The position of the spring adjustment ring (10.3) is factory set and should not be altered.

---

Remove the balance spring (10.2).

Fit the replacement balance spring (10.2) ensuring it is correctly seated in the spring actuator (10.4).

Screw the spring end cap (10.1) down hard onto the spring adjustment ring (10.3) until the spring is compressed and the endstop is reached.

Slide in the spring cover plate (10).



**WARNING!** To prevent possible personal injury, do not operate the Vision 3 pan and tilt head without the spring cover plate fitted.

---

---

---

## Parts list

The following lists include main assemblies, user-replaceable spare parts and optional accessories. For further information regarding repair or spare parts, please contact Vinten Broadcast Ltd or your local distributor.

For information on-line, visit our website at

**[www.vinten.com](http://www.vinten.com)**

### **Main assemblies**

Vision 3 pan and tilt head	3543-3
Bowl clamp knob assembly	3330-30
Pan bar and clamp	3219-78
Camera mounting plate, with 3/8 in. BSF screws and VHS pin adaptor	3449-900SP
VHS pin adaptor	3330-29

### **User-replaceable spare parts**

Brake knob kit	3431-900SP
Battery ('N' type)	C550-024
Balance spring kits, comprising spring, spring cover plate and instructions:	
Spring strength 1 (silver)	U005-161
Spring strength 2 (grey)	U005-162
Spring strength 5 (green)	U005-165
Spring strength 8 (red)	U005-168
Spring strength 9 (black)	U005-169
Spring strength 10 (yellow)	U005-170

### **Optional accessories - Quickfit adaptors**

ENG Quickfit Automatic Adaptor (with wedge plate)	3371-3
Quickfit wedge	3763-11

### **Optional accessories - tripod and pedestal adaptors**

75 mm ball to 100 mm bowl adaptor	U005-159
-----------------------------------	----------