PANTHER
Telescope Mount *TTS-160*

Sidemount Dovetail saddles

User manual

Contents

Introduction

TTS-160 Sidemount Dovetail Saddle is an optional accessory to be installed and used on the TTS-160 telescope mount. It's made to receive standard dovetails of the "Vixen" style (approximately 45mm (1.75") wide and 12 degree side angles). The capacity is approximately 8 kg telescope weight.
The Sidemount Dovetail Saddle is installed on the side of the mount head. It is possible to install Sidemount Dovetail Saddles on one or both sides of the mount head to accommodate one or two telescopes.
With the Sidemount Dovetail Saddle installed the TTS-160 mount solution becomes extremely compact and easy to transport as no counterweights is needed.

> **NOTICE:**
> The TTS-160 Panther Mount is described in its own user manual. Please read that user manual before you start using the Sidemount Dovetail Saddles.

Product safety

> **WARNING:**
> Never point a telescope towards the sun without a proper full aperture solar filter.
> Do never look in the eyepiece when the mounting is slewing during daytime as the telescope might pass the sun.

Always setup the mounting on a level surface so that it cannot fall over.
The mounting consists of heavy parts – be careful not to drop these.
Always keep a hand on the telescope when the dovetail adapter is not tightened (for balancing etc.). All dovetails must have a security stop in each end ensuring the dovetail can't slide out of the dovetail saddle.

Electrical safety:
The mounting must be powered from a 12V battery with a 3 Amp fuse. **Always connect all cables to the mount and peripherals before connecting the battery power.**
Disconnect the battery power when the mounting is not in use.

> **WARNING:**
> Never use mains power and a power supply for outdoor use.

Receiving the Sidemount Dovetail Saddle

The Sidemount Dovetail Saddle is unpacked from the shipping box and is immediately ready for use. The delivered parts are:

- Sidemount Dovetail Saddle assembly
- Conical brass axle adapter
- M8 screw for mounting the Sidemount Dovetail Saddle (note that this screw is shorter than the screw used for mounting the Top Mount Saddle)

Installation

This section describes how to mount the Sidemount Dovetail Saddle on the TTS-160 Panther mount.

Remove Top Mount Assembly (counterweight arms and top dovetail saddle)

Setup the Pier and install the mount head onto the pier. This gives stable work conditions.

Loosen and remove the two M8 screws in each end of the altitude axle. Use a metric 6mm Allan key.

Release the two altitude clutch handles and rotate the counterweight arms to a horizontal position.

Remove the two brass axle adapters. They are conical in shape and locks a little in the end of the axle. To free them give the opposite side of the Top Mount Assembly a light blow with the hand.
When both the brass axle adapters are loose remove them and the Top Mount Assembly.
Store the Top Mount Assembly, two brass axle adapters and two M8 screws for later use.

WARNING:
The brass axle adapters comes out quite abrupt. Keep a firm grip to the Top Mount Assembly and the brass axle adapters.

Install Sidemount Dovetail Saddle

It's very easy to install the Sidemount Dovetail Saddle.
Insert the brass axle adapter into the Sidemount Dovetail Saddle.

WARNING:
Never tighten the Altitude lock on the Dovetail Saddle without having the brass axle adapter inserted. This will bend and damage the lock.

Insert the brass axle adapter into the altitude axle end. The Saddle lock screws must be upwards. Secure with the M8 Screw. Use a 6mm metric Allan key to tighten the screw.
Do not overtighten the screw.

Mounting the telescope(s)

The Sidemount Dovetail Saddle are suited for telescopes up to approximately 8kg.
The telescope must have a "Vixen" style dovetail mounted. The dovetail must have a security screw at the front end.

Open the locking screw on the Sidemount Dovetail Saddle so much that the dovetail can be inserted into the bottom om the saddle and tilted into position.

Tighten the Saddle lock screws.

⚠️ **WARNING**: Ensure that the dovetail locking screws are tightened before letting go of the telescope

Balancing and adjusting the telescope

To balance the mount in altitude direction do the following:

1. release the altitude lock screw
2. With a firm grip to the telescope loosen the two saddle lock screws a little – only enough to allow the dovetail to slide in the saddle
3. Slide the dovetail in the saddle until the telescope is balanced
4. Lock both saddle screws and the altitude lock.

Balancing in Azimuth direction is not necessary.

If two telescope placed on each side of the mount head are used these must be aligned using adjustable tube rings.