

HNA PTY LTD
GROUP



Elevating safety through innovation

TYRE HANDLER

PTZ Camera System



HNA Group have designed, developed, manufactured, and patented the next generation of camera systems to assist in the safety of tyre maintenance personnel

The design and concept of this product was brought together with an idea of, how do we keep the tyre fitters / maintainers away from harm during their duties.

After time was spent with numerous OTR tyre bays, the consensus was, how do we get a clearer picture of the wheel assembly whilst mounting it with a tyre handler and not have personnel in the line of fire. Also noticed was when the tyre handler was used for breaking beads, the operator had no line of sight to the tyre grab and needed a spotter for direction.

With all this in mind, a proto type camera was manufactured that had the following functions...

- Panning of the camera
- Tilting of the camera
- Zoom function with auto focus
- Infrared capability to observe in dark areas
- Large screen mounted in the cab
- Joystick operation of the camera

Once all of these functions were completed, it was time to make the unit mine site ready. This consists of...

- Vibration dampening of the camera unit
- Magnetic base to easily move the camera into different positions
- Water and dust proof
- Rugged powder coated aluminium housing for the screen and joystick
- Heavy duty braided harness with typical off the shelf Deutsch connectors
- Accessory circuit activation, key on, camera on.

Once the concept was completed, we began a trial period of 6 months in the field testing, the overwhelming support that came from the tyre bay was enough to start a small production run. BHP in Central Queensland came together and asked for all the tyre handlers across multiple sites to be equipped with this camera system.

18 months later, we have completed this work and it's now ready to be delivered to the open market.



INSTALLATION

Installation of the camera system is very simple and easily explained, the only electrical work needed is to terminate the ends of the braided harness and locate a 24V accessories circuit to wire into the system, all fuses are held within the screen assembly. Installation time depending on the harness entry point on cab will take around 4 - 6 HRS for 2 tradesmen to complete.

TYRE HANDLER PTZ CAMERA SYSTEM

Key Features

- Robust camera design with vibration dampening mounts and stainless handle for quick easy movement of the camera, inset of picture is the custom made harness and Deutsch connector.
- With a magnetised base, the range of movement for the camera makes tyre fitting easier to place it into the correct spot, then the operator can Pan / Tilt / Zoom into position for clearer vision.
- Powder coated aluminium housing makes for a strong and reliable screen. Ease of camera control was paramount for the operator and a large joystick was adapted. All functions of the camera are controlled by the one joystick. To power up the unit, turn the machine key on, it then powers up. There is only 1 button on the side of the screen and that is to turn the screen on and off, the camera is still powered up during normal machine operation.
- Camera harness is run up and over the mast sheeve with the rest of the OEM hoses / harnesses. If there is no spare pulley for this, we can work with you to supply a spare sheeve to gain access for the camera harness.



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Standard vision from the cab looking down at the manipulator with no zoom.



Standard vision looking at the truck parked 8 Metres in front of the tyre handler.



Tyre handler still in the same position with half zoom activated on the truck 8 Metres away.



Tyre Handler still in exactly the same position, this time with full zoom activated and truck still at 8 Metres away.

TYRE HANDLER PTZ CAMERA SYSTEM KIT includes...

- Modified PTZ camera
- Modified camera screen, pre-programmed for that PTZ unit
- Custom stainless steel handle assembly with stainless vibration mount
- Magnets to suit the mount and the harness assembly
- Custom designed, braided harness with Deutsch connectors
- All hardware, including zipties, brackets, stand offs, bolts / nuts
- Heavy duty RAM mount to suit the screen application
- Wiring diagram, instruction manual, fitment manual

Contact us today for a custom solution tailored to your needs

ABN 59 644 632 440

ANTHONY - 0412 446 807
anthony@hnagroup.com.au

CRAIG - 0409 377 930
craig@hnagroup.com.au



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or download additional product
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www.hnagroup.com.au

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