



**your  
installation, user  
and maintenance  
guide for:**

**CATTLE HANDLERS  
HEADBAILS  
SMART-YARDS  
3 WAY DRAFTERS  
ACCESSORIES**



**AU 1-800 124 034**  
**NZ 0800 80 90 98**

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TechniPharm takes due care to ensure your needs are met by recommending to you the appropriate handler, however there may be times that your farming practise changes (say from dairy to bulls) or you buy on a budget and end up with a lighter or less equipped unit than what you should have for the type and volume of animals you work with. You may also find that once you start using our systems you do much more handling than what you thought you would. What ever the reason may be and If for what ever reason you find that the unit you have is under specified for the job at hand talk to us about upgrades, being that a trade and upgrade or the installation of air over kwiklock or oil operation. In general the larger and heavier the animals the more equipped you ought to be.

Warning: Handling livestock is always dangerous no matter what, so always be at your guard, never let the animal you are working with out of your sight and always be aware that equipment can fail where installed engage secondary safety systems.

Technipharm takes due care to ensure the products are suitable for the intended use, however the nature of farming determines that there are elements of danger in operating and often farmers may resort to an element of self help or self fix which inevitably has a further element of danger attached to it. Due care is advised. General and complete indemnity, Technipharm and or its assignees will in not in any way be responsible for any accident due to misfortune, misuse or any other form of use or non use of any and all equipment it provides. The client through obtaining the said equipment takes responsibility for diligent use and safety precautions required by any local or national authority and accepts full responsibility.

# A guide to your new cattle handler...

## THE COATING OF THE FUTURE! SECOND TO NONE!

**FEATURE: DULUX ZINC SHIELD™**  
Industrial grade powder coating

### BENEFITS TO YOU:

- ✓ Complete pre-sand blasted
- ✓ Coating thickness = 250-300 microns which is 1000% thicker coating than paint, 300% thicker than galvanising!
- ✓ The coating that maintains high tensile steel strength unlike the 'hot dip' process that commonly weakens steel

- ✓ The environmentally responsible way!

## UP TO 30% EXTRA FRAME STRENGTH

**FEATURE:** Prestressed 20-25 and 30 Ton bending strain

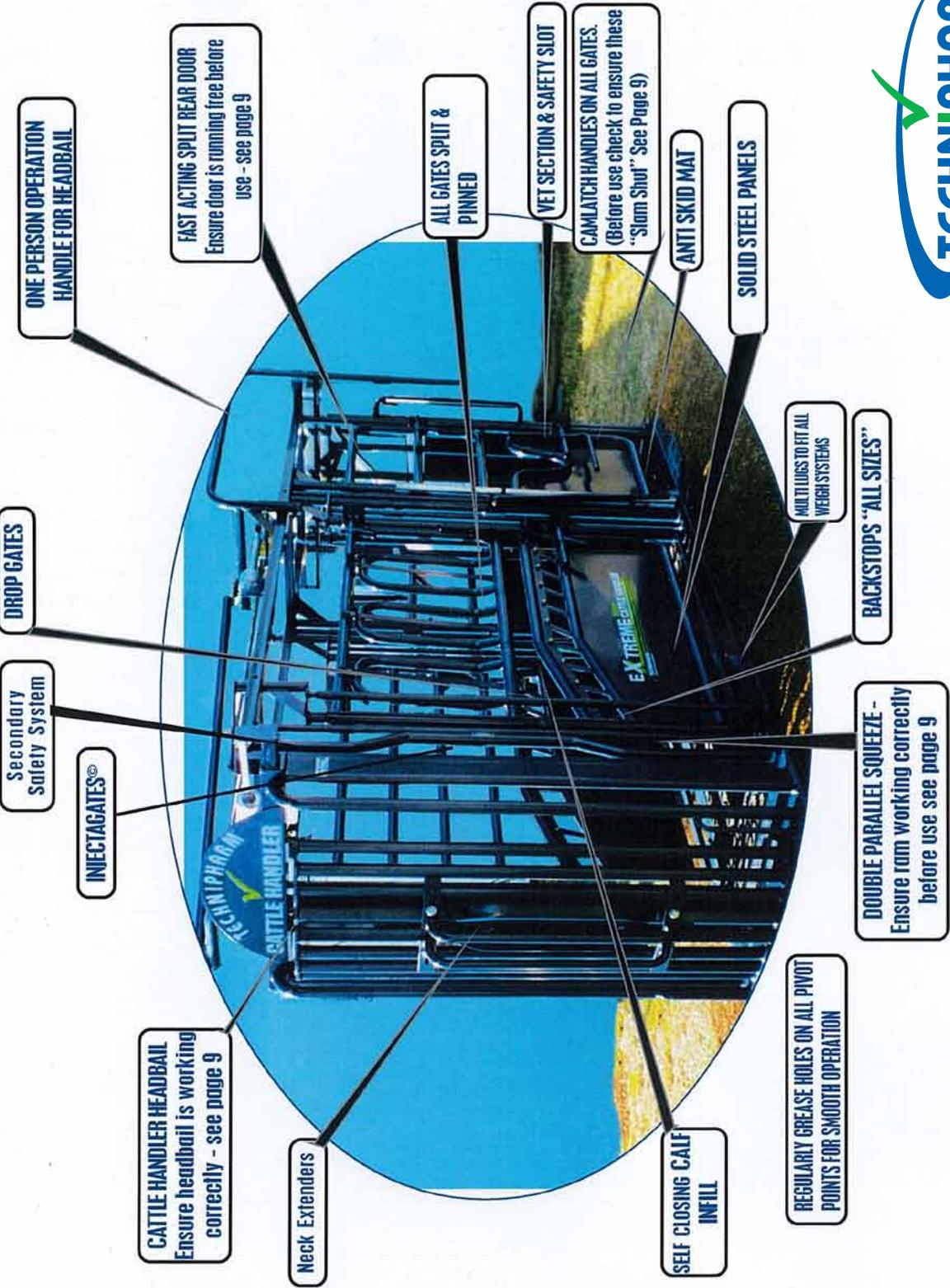
### BENEFITS TO YOU:

- ✓ Ensures your investment will last and last!
- ✓ No metal fatigue which is common with cheap units

## PIPE OVER PIPE HINGING

### BENEFITS TO YOU:

- ✓ No sagging or lifting of gates ever!
- ✓ Ensures all gates swing freely "always"
- ✓ Substantially stronger



Congratulations on your choice of a Technipharm Cattle Handler. We wish you to get the best out of your Cattle Handler. The following is a guide to assist you in ensuring your Handler performs at its optimum level. Please spend some time reading through the information. We advise that you use as many of the relevant points as possible in the siting and installation of your Cattle Handler

### **Installing a Technipharm Cattle Handler**

#### **Concrete base pad**

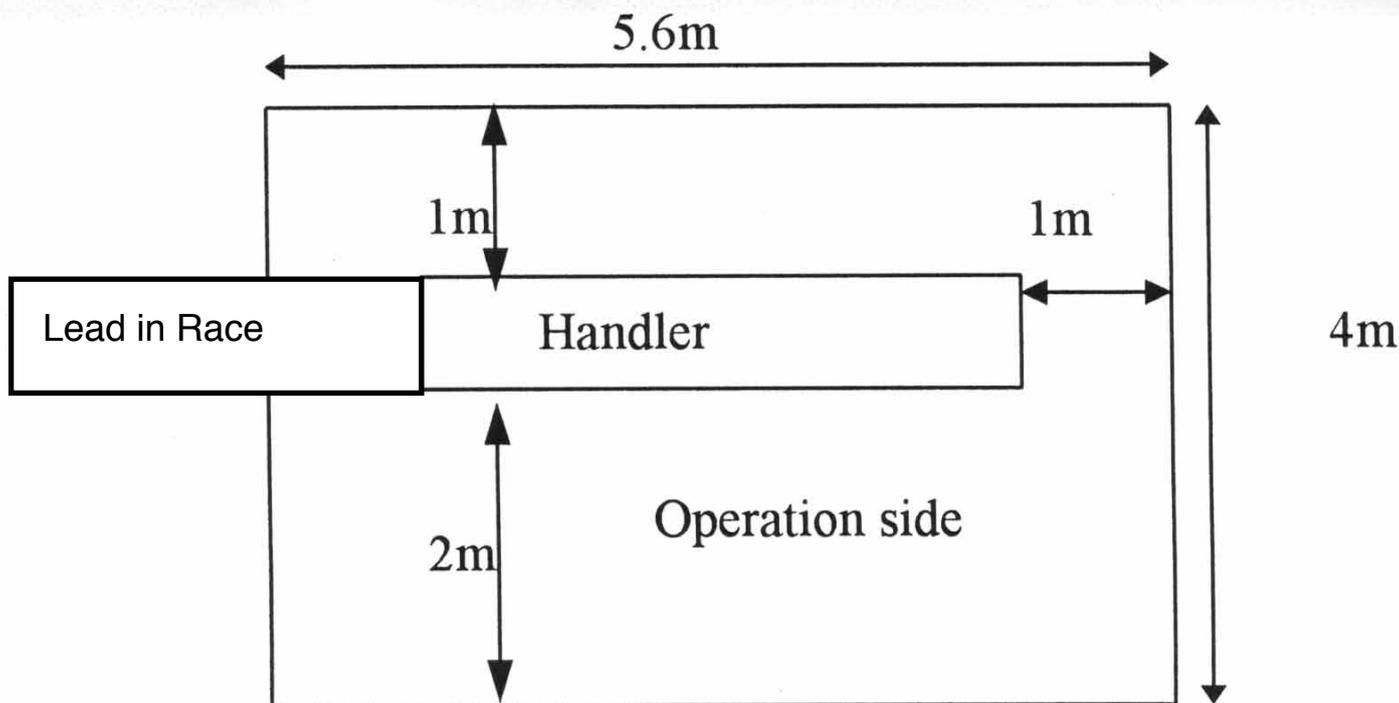
Technipharm recommends that Cattle Handlers are installed onto a concrete pad. The reasons for this are.

- Solid platform for mounting weigh scales to the handler,
- Provides a safe and level platform for the operator,
- Raised slightly from yard surrounds, allowing drainage of water from the main working area

#### **Dimensions**

The pad itself is an important component in the future success in using your CattleHandler. The dimensions of the pad are quite variable but Technipharm suggests that the pad be similar to the diagram below for a full size Cattle Handler (with vet section).

#### **Example**



The concrete pad should extend out the front of the handler for at least one meter for when animals leave the handler. Also extending the concrete one meter behind the cattle handler, prevents animals pugging up the area behind the cattle handler.

On the non-operation side the pad should extend one meter outside the handler as there will be times when the odd job is done on this side.

On the operation side, the concrete should extend two meters outside the edge of the cattle handler. The first reason for this is so the operator has a large platform to move back and forth on. This in turn reduces the risk of rolling an ankle on the edge of the concrete. A second reason is so that if two people are working together ie a vet and the farmer, then they have room to walk around each other with out the need to step off the platform. A third reason is so that if you wish to place a trolley, workbench or drum on the pad to place items on, then there is enough room to do so.

Behind the cattle handler, the lead in race may also be concreted so as to reduce the amount of mud being moved to the vicinity of the handler. Concreting the race is not essential to the operation of the handler. However this mud may cause long term damage to the weigh bars or cause weighing errors in the short term.

A common question is how thick to make the concrete? Technipharm suggests that the depth of the concrete pad is 100mm thick (4 inches) . This should provide enough of a base for long term solidity. On softer ground the concrete pad may need some reinforcing steel to provide enough strength.

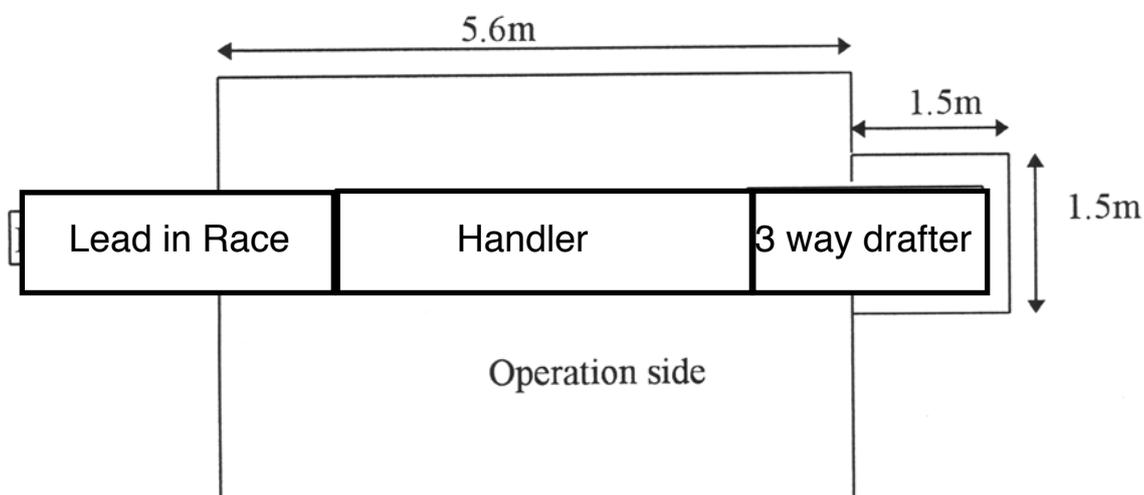
For full size cattle handlers, the dimensions of the pad will work out to be 5.6m by 4m. This gives a total surface area of 22.4 square meters. At 100mm thick, this gives a total concrete requirement of 2.24 cubic meters of concrete for the pad that the handlers sit on.

Some farmers suggest that the concrete pad be sunk so that the floor of the cattle handler is level with the lead in race so animals do not have to step up onto the floor of the handler. The two main disadvantages of constructing the concrete pad in this manner, is that there should be no place for moisture and debris to accumulate around the weigh bars of the scales as this may cause permanent damage to the bars. The second reason is more practical. It is good in handling situations for the animals to hesitate a little before entering the unit so that the animals are not going full speed as they enter the cattle Handler.

### **3-Way Drafter**

Most farmers choose to install a Technipharm 3-way drafter in front of their Handler. It is recommended by Technipharm that the drafter also be mounted onto a concrete pad. If this is the case then the dimensions of the concrete pad should be adapted as below. If the farmer so wishes then the pad may be made bigger.

### **Example**

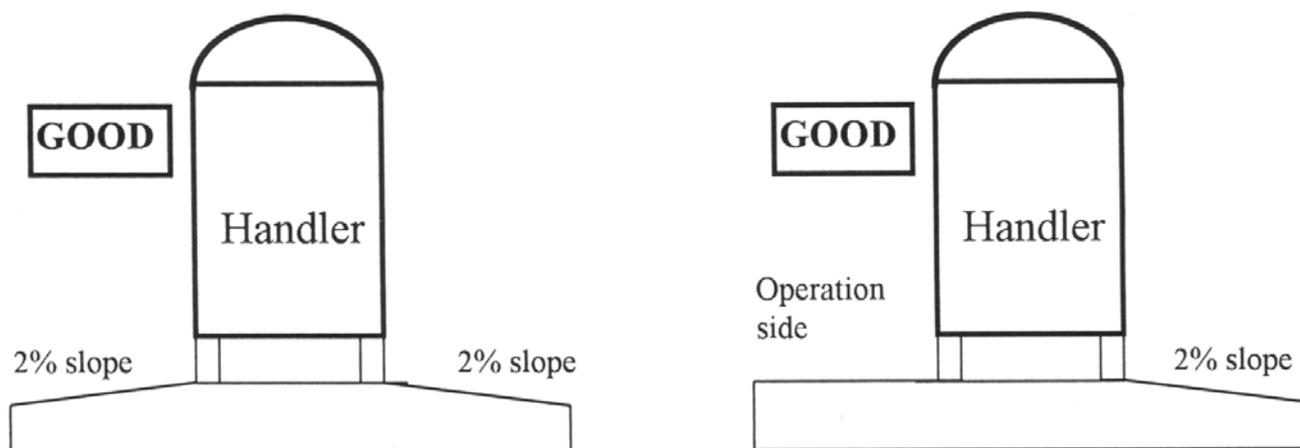


### **Slope of Concrete**

The slope of the concrete is an important factor in the design of the concrete pad. Obviously some slope is desired for water to flow away from the Handler. It is CRITICAL however that the Cattle Handler be on a dead level piece of concrete in order to increase the life of the weigh bars that may be mounted under the Handler. The levelness of the concrete slab is also important in order to get accurate weights. If for any reason the weigh bars are not depressed evenly then the signal from the bars to the monitor may be inaccurate.

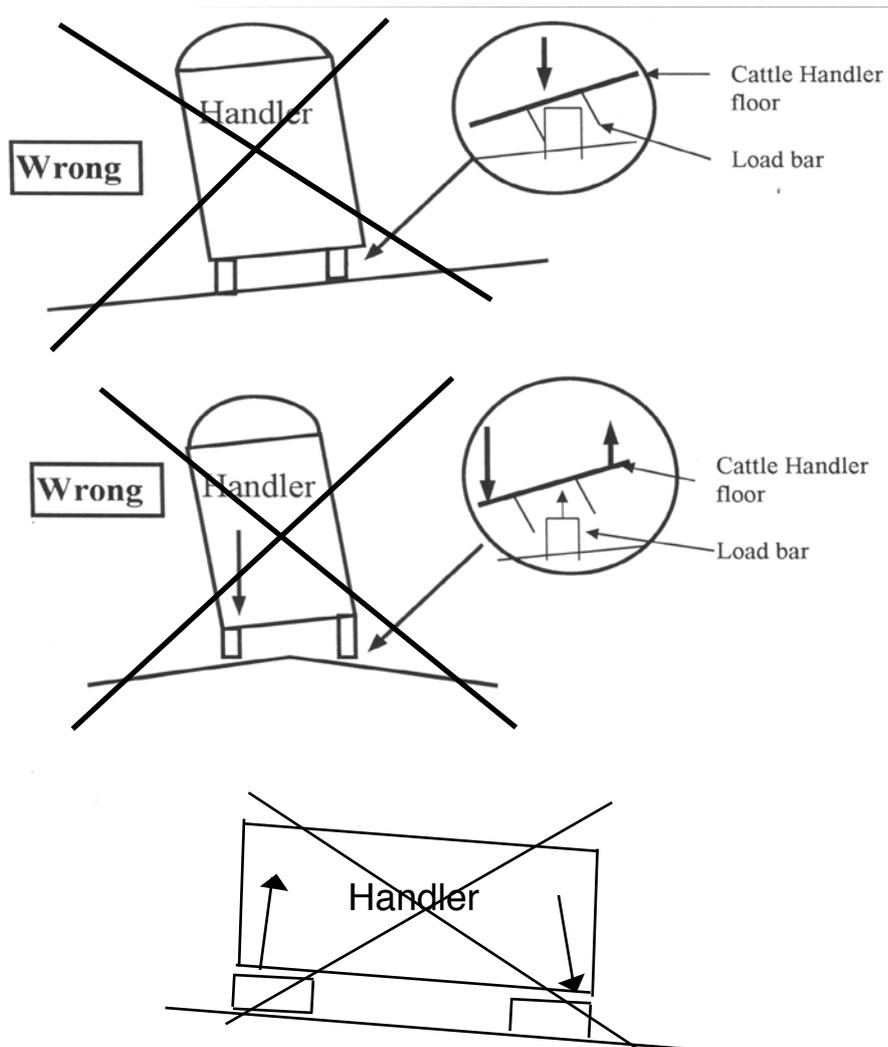
Possible designs of concrete pads are shown on the next page along with some inappropriate pad designs.

## Correct Concrete Pad Construction



Appropriate concrete pad set ups for mounting your Cattle Handler.

## Incorrect Concrete Pad Construction



Inappropriate concrete pad set ups for mounting your Cattle Handler.

## Testing your unit.

After the concrete pad has set (4-7 days), it is time to test out your site with the Cattle Handler. It is best here to place your cattle handler onto round posts to allow for ease of movement as shown below. After placing your handler on the posts, manipulate it until it is in the desired position.

Ensure that all opening and moving components are working. Also ensure that where you will be standing and operating the unit from is clear and able to be worked from safely. Technipharm advises that between the rear of the handler and the end of the lead in race or any other structure, that there be a minimum of a 50mm gap (2 inch). This is to ensure weights are not interfered with by having the handler rest on the end of the lead in race. It also provides a small safety component as it reduces the risk of getting fingers jammed between the Handler and the post.

Ensure that items such as drafting equipment at the front of the unit will work with the cattle handler in this position. Also check that other existing structures within the yards are in appropriate positions so that they do not come into direct contact with the cattle handler but can still be used.



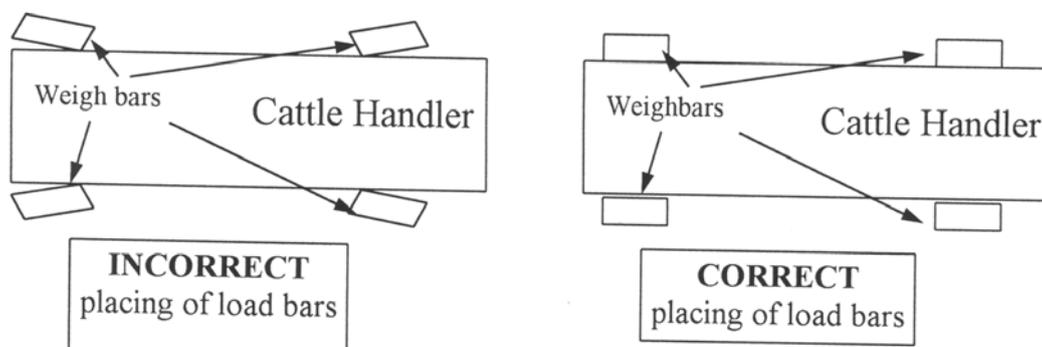
## Weigh Bar Options.

In choosing a weigh system it is important to consider a few important matters, and while Technipharm respects your options as to which brand of weigh bars you choose we do want to share with you results and recommendations which we have gained over the last 10 years or so. In the end we want you to have a Forever Better system.

It is vitally important that a handler (no matter what brand) is not rocking, (sideways or forward and “up and down”) as this not only affects stability and repeatability of weigh results, it also affects safety issues on gates and potentially the headbail. In addition more movement creates more noise and the last thing we want is noise, as noise is stress. Ideally we use a 4 corner base rigid weigh system, with that we create stability and a 4 point weigh system. (This can be achieved by using a 4 bar 4000KG weigh system, or a Ruddweigh or Smartscale 3500 weighbar) A weighbar system like a Tru test 1010 is not desirable as it sits on roller bearings which results in extensive movement of system and is only “2 point” weigh based system)

## Mounting a Thunderbird Four Bar System

Place the weigh bars in the correct positions under the Cattle Handler. Ensure they are lined up with the cattle handler and are not off on any angle or are off center (see diagram below). Mark the holes where the bars will be attached to the concrete.



Once the Handler is removed from this trial position, the weigh bars should then be dynabolted down to the concrete pad. Technipharm advises that the dynabolt should be no less than 10mm and preferably 12mm. The dynabolt should be 80-100mm in length. The hole in the concrete should be drilled according to the size of the dynabolt. When bolting the weigh bars down to the concrete, the dynabolts should be tight enough to prevent any movement of the weigh bars.

In order to achieve accurate weights when weighing it is very important that when you are setting up the weigh bars that they are level. Using a spirit level in order to get the weigh bars level is an important step in the installation of your Cattle Handler. Placing thin washers between the concrete and the weigh bars may be necessary to reduce this slope. Correct installation may assist in the prevention of many future problems. You can now manoeuvre the Cattle Handler back onto the load bars. The Cattle Handler is now ready to be bolted down to the weigh bars using appropriately sized bolts.

A correctly set up Handler on a ThunderBird four weigh bar system is shown below left while a Ruddweigh bar system is shown to the right



### **Mounting Ruddweigh 3.5T or 2000kg Extension Bars**

Ruddweigh weigh bars through their unique design do not require the handler to be manhandled back off the weigh area. The bars can be aligned to their final position and then have their Dynabolt holes drilled while the bars and handler are in position eliminating any chance of the bars ending up in the wrong position. An example of a installed Rudweigh bar system is shown above right.

Care still has to be taken however that the bars and handler are aligned correctly when positioning the bars so that the bars are square to the handler. Similar precautions should be taken with the Ruddweigh system as that described already with the thunderbird four bar system to prevent any risk of incorrect installation.

### **On going Scale monitoring / Maintenance**

Once the system is up and running it is important to check the weigh bars and cables each time before using the scales and monitor. Ensuring that the bars do not have any dirt or dung in the bars themselves and checking that there is nothing under the handler that may affect weighing will ensure accurate weights each time the unit is used.

One way to prevent the build up of mud under the handler or weigh platform is to place a 4x2 or 6x2 board at the end of the race, between the end posts to prevent mud from being kicked forward by the animal under the handler or platform. This “mud trap” is particularly important where the race is not concreted. Ensuring that the Handler and platform is kept clean from the build up of debris and mud is the responsibility of the operator. In a similar situation, steps should be taken to prevent mud been kicked in to the side of the handler from the yards. A situation where mud has accumulated around the bars creating a problem



is shown to the right. Should a service visit be required to solve a problem caused in this manner then that service call including time and mileage will be invoiced for by Technipharm.

## Integrity of the Weigh System.

Checking your own weight each time you use the bars is a good test to ensure the integrity of your system. A weight within a few kilograms of what you weigh should not cause concern. However if the weight displayed is significantly lighter than expected, then check under the handler and ensure that there is nothing “propping up” the handler or interfering with the weight such as mud or debris. You may also need to check the start up procedure of your weigh system (see weigh system manual).

## HANGING HANDLER

For the ultimate in weighing systems and to ensure debris build up does not become a serious issue, you may want to look at Technipharm's HANGING HANDLER concept where the entire handler is suspended in mid air. This gets the bars off the ground eliminating the most common cause of bar failure. This system is only possible through the strength and rigid mounting design of the Ruddweigh 3.5T weigh bar. Talk to us today on 0800 80 90 98 to see if this concept is right for you.



## Mounting a headbail.

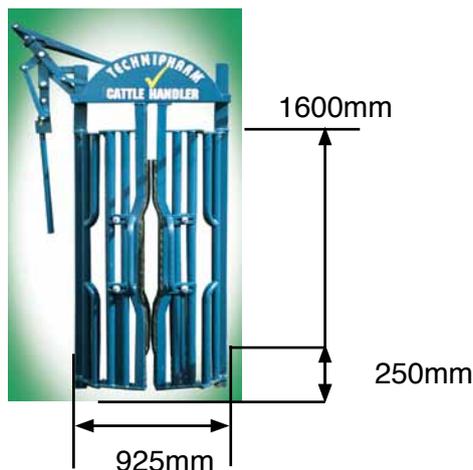
Headbails supplied by Technipharm, come equipped with mounting lugs ready to mount directly onto the end of the race. The dimensions and placement of these lugs are shown below.

### Mounting Lug Heights

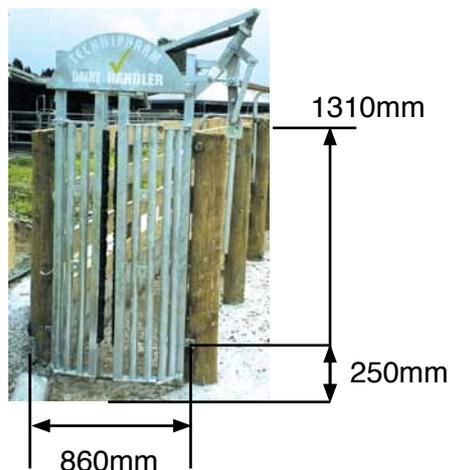
#### Rotating Yoke Headbail



#### Concertina Cattle Handler Headbail



#### Dairy Handler Headbail



The width of the mounting lugs indicated above are from the center to the other center of the mounting lugs.

Technipharm suggests that where the headbail is placed, that the area in front and behind the headbail be concreted so that when the animal is in the bail, if it struggles then it is not damaging the ground behind the headbail. Likewise concreting in front of the headbail will allow for improved animal flow, and prevent the animals digging a hole with their hooves as they exit the headbail.

## Mounting in existing wooden yards

The headbail is attached to the end of race strainer post by drilling a hole through the post, then inserting a 15 or 20 mm thread end through the post and securing the head bail to the post. It is important that the post is of a sufficient size( min round 300mm) and quality to withstand significant forward pressures and that they do NOT move to the extent that they impact on the correct working of the unit.

The positioning of these mounting points will vary depending on which Technipharm head bail you have purchased. The first step in installing your headbail is to determine where the holes will be drilled. This is done by positioning the headbail in its final position and marking where the mounting lugs will attach to the post.

With a drill bit the same size as the thread end, drill through the post. Then push the thread end through the mounting lugs and through the holes you have just drilled. On both ends place a big washer and a pair of nuts. Tighten up until the washer on the post end is pulled into the wood.



**To order anti-backing runup system call 0800 80 90 98**

When a headbail only is placed at the end of a race, it is recommended that for ultimate control of the animals an antibacking run up system is placed within the rails, this will stop large neck bulls pulling back and give more control to other animals needing treatment. If you handle many large neck bulls than we recommend a necklamp be installed as part of the Rotating Yoke Headbail (you can upgrade older style yokes of the rotating yoke system) in addition you may consider for even easier handling and additional neck pressure you install/upgrade to air over kwiklock or oil operation.

### **Mounting a headbail in Technipharm Smart yards™**

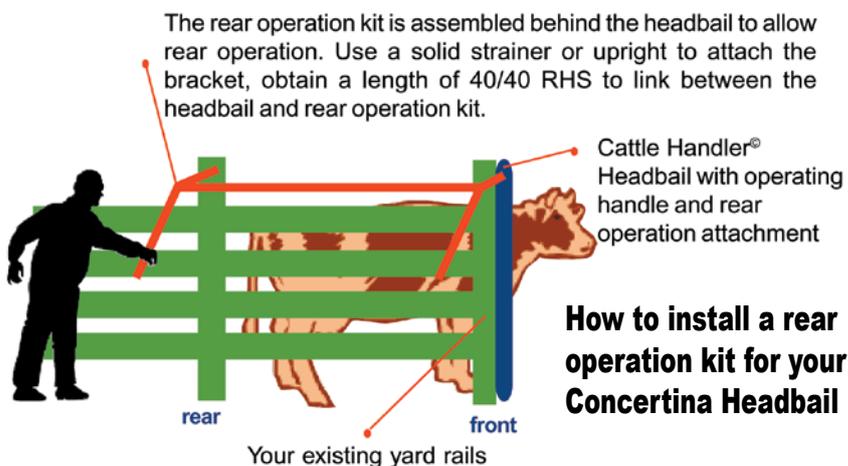
#### **Dairy Handler Headbail.**

When a Dairy Handler Headbail is purchased to be installed in front of a smart yard system, the unit comes equipped with mounting lugs ready to attach to the panels of the race. This is adequate for dairy animals that the headbail will be dealing with.

When installing the headbail, it is merely necessary to drop the mounting pins between the dairy handler headbail and the end of the race and the unit is ready to go.

#### **Rotating Yoke or Concertina Cattle Handler Headbail.**

When installing a Cattle Handler headbail in front of a smartyard system, due to the nature of the animals to be handled and the heavier weight of the headbail itself, mounting directly to the smart yards is not a desired option. Therefore to mount the headbail it becomes necessary to place two strainers at the end of the lead in race and to then mount the headbail directly onto the posts as per the instructions above.

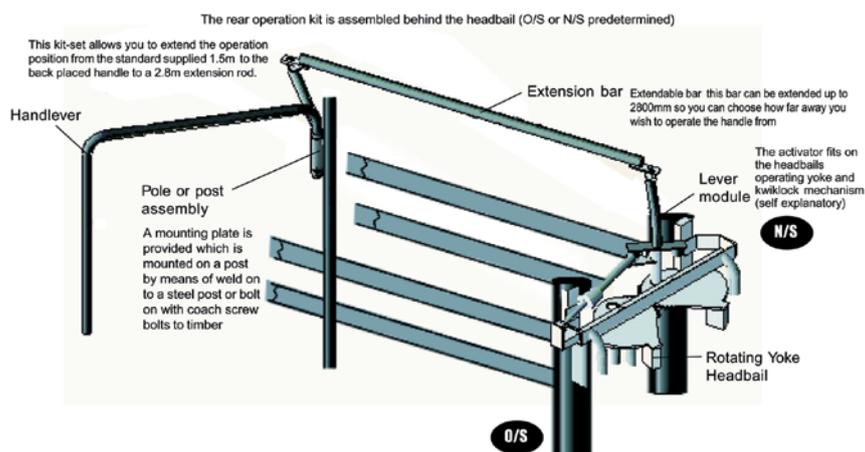


#### **How to install a rear operation kit for your Concertina Headbail**

#### **Rear operation Kits**

Rear operation kits are available for all Technipharm Headbails including the Rotating yoke headbail. These mounting kits allow you to stand behind the animal to have them walk away from the operator. The Rotating yoke headbail by the nature of its handle allows you when locking the animal to stand level with the last rib. Technipharm suggests that you trial your Rotating yoke headbail with this standard handle first as in most situations the standard headbail works fine. Contact Technipharm on 0800 80 90 98 if after using the headbail you feel that you need the rear operation kit set. Individual installation guides are available on request for the rear operation kits of the headbails.

#### **How to use and install your rear operation kit for your rotating yoke headbail**



### Pre-commissioning testing of your Handler/Headbail.

In some cases transit can affect operation settings on some equipment. So before getting all your cattle in the yard and expecting everything to work fine, do a quick PRE-COMMISSIONING TEST! The best test is to get a few animals in the yard and get a feel for how it all works, while at the same time you can make final adjustments.

### Ongoing checks

It pays off to test the system from time to time to ensure all is working, nothing is broken or in need of adjustment.

### Headbail

Open the head bail fully open and then close the bail half way. Make sure that the last movement of the operating handle is away from the front of the headbail. Then stand between the yokes and try and push them apart. If nothing happens then the headbail is ready for action, if the yokes come apart then the Kwiklock ram may need some adjustment. Details on how to do this can be found on page 11.

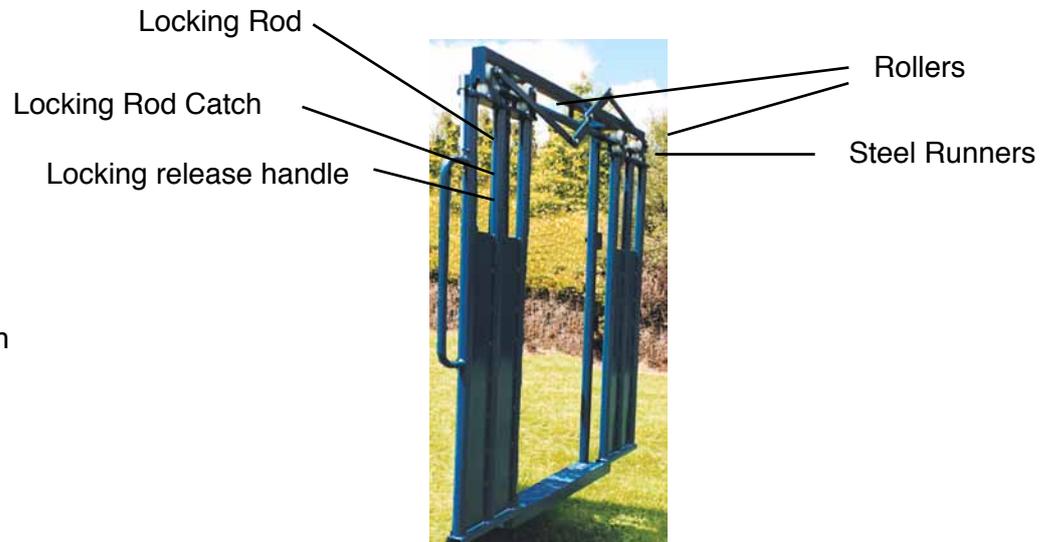
If you have a jack handy do the ultimate test and jack the yokes under pressure

### Cattle Handler

Like the headbail there are areas in the Cattle Handlers which can be affected in transit. The first of these is the rear sliding gate into the handler.

When the Handler arrives on farm, operate the door a few times, the door should open and close with very little effort. If opening and closing the unit takes a substantial amount of effort, then check to ensure the rollers at the top of the gate are lined up

with the steel runners and haven't been knocked off line. The locking rod prevents the door coming open unless you are depressing the locking release handle with your hand. If the door is coming open without you depressing the handle then the rod has probably been set in its open position by use of the locking rod catch. This can in turn be released by the turning this catch. Greasing the doors rollers will assist in the trouble free operation of your sliding door.



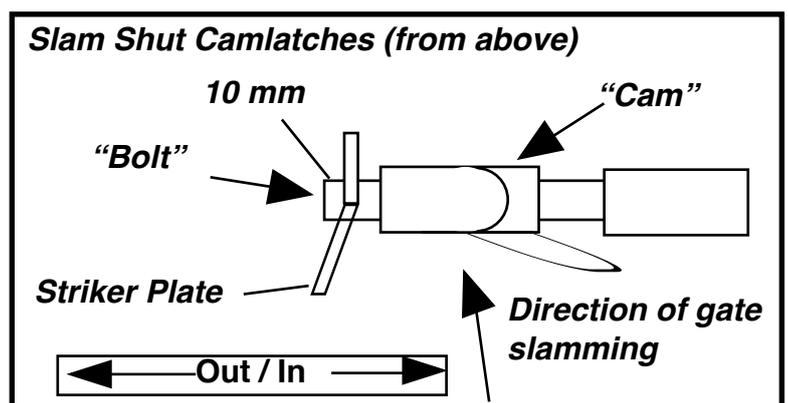
### Split Side Doors - Please check this before use

When the Cattle Handler leaves the factory, the doors are set for easy slam shut operation. Unfortunately during transit the striker plates can be bent which can affect how easily the gates slam shut. It may also affect the gates staying locked when they are under pressure (Particularly if a squeeze is installed). If the striker plate is set too far in then the bolt will not slide into the hole of the striker plate preventing the gate from closing. Too far out and the gate may fly open when and animal places pressure on the unit. To check this out, measure how far the bolt protrudes through the striker plate in its closed position. This should be approximately 10mm.

Altering the angle of the striker plate out should allow the bolt to slide easier and allow the gate to "slam shut". Angling it in should prevent the gates from opening under pressure.

Greasing the 'cam' (the angled part of the latch) will also help ease the bolt into the hole of the striker plate.

To bend the striker plate in or out, place the 'beak' of a crescent on the plate and apply pressure in the desired direction.



## **How to care for your Cattle Handling Equipment**

No matter what typ of farm implement you have, they are all exposed to variouse degrees of chemicals, dung, urine, mud and possible “bashings” in other words it’s a rough life being an implement.

Caring for your imnplement will enhance its life expectancy significantly.

There are 2 parts

- 1) General maintainance and greasing jobs
- 2) Annual care service

The first is just a matter of having a regulart maintenance plan in place, grease, check parts Ok and working properly, test before use. (see further specifications under.....)

The second is a matter of some general care to enhance the life expectancy of the unit. No matter what coating is provided, chemicals of drenches, salt spray, dung, urine are all agrisive compounds which will eat away at anything it is in contact with, the longer that contact persist the shorter the coating will last, once the coating is gone,,, the steel is next. Note Galvanising is a coating which protects by “being eaten away” it has to react with the environment in order to provide for its zink coating protection, zinkshield with powder-coating does not eat away by reaction, but wears out all the same.

We recommend that every headbail, handler, yard, weighbars etc etc are washed thouroughly at least once a year, this with either a volume hose or highpresure washer. This will remove all corrosive components and remove dirt and dung from corners and area’s you normally do not “see” but which are important to the integrity of the unit.

After washing, let the unit dry and spray coat with a fish oil or equivalent. This will ensure the unit gets a second protective coating which will protect the first one.

Technipharm provides the option of an annual service contract, contact us if you are interested to subscribe to this.

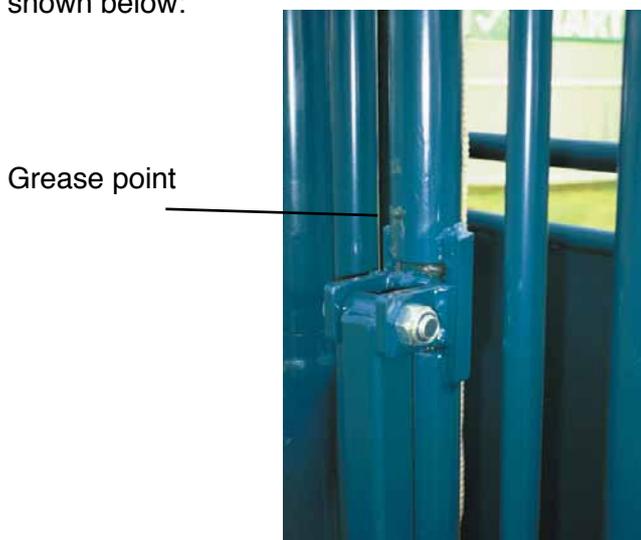
All our warranties are subject to all maintenance recommendations being followed and recorded with date and action taken. Any issues need to be reported to us so we can assist immediately and help you get things back on track. TechniPharm warranties are generally double that of any alternative. “we make farming ezy”.

## **Handler & Headbail Maintenance**

A Cattle Handler is a serious investment and like any good investment they need regular maintenance in order to maintain their value and are in good working order for you when you need them.

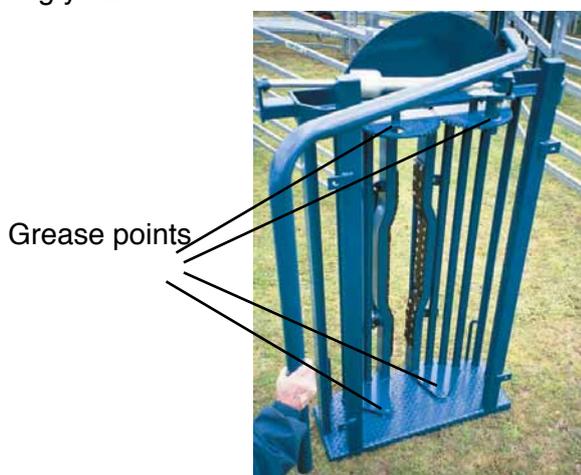
This preventative maintenance can enhance the working ability of your handler.

The first major maintenance is getting into the a habit of regularly greasing the unit. This includes all of the pipe over pipe hinges and places such as where the handle for the parallel squeeze comes out. All of the places that require regular grease application have grease points ready for a grease gun. An example is shown below:



## **Headbail Maintenance**

With regard to the Rotating Yoke Headbail, some greasing can assist in having the unit keep its free moving ability. Greasing points here include the teeth of the sprockets of the two main plates and also the mounting pins at the top and bottom of the rotating yoke.



In addition to the headbail itself needing maintenance, the kwiklock ram can also be benefited by preventative measures. When the unit is not to be used for a while then opening the bail fully so that the shaft of the ram is retracted into the housing will assist in ensuring trouble free operation for many years to come.

## **Concertina Headbail Maintenance**

In some older concertina headbails including both dairy handler and full size cattle handler headbails, the eye that operates onto the end of the ram, can sometime become misshapen, as shown in the photo to the right. This is simply a wear and tear item, and replacement may be required. A much heavier eyelet is now supplied as a cross. Simply phone Technipharm if you require this.



## **Rear Door Maintenance**

The rear door at times may also need to be looked at, to ensure smooth and trouble free operation. This may be done by keeping the rollers at the top of the door lubricated. Also preventing a build up of any mud or dung near the bottom of the door will allow easier operation in the long term. This may be done by use of a wash down hose or something similar.

Sliding gates and handlers with 8 rollers can sometimes become loose making opening and closing the doors a little more difficult. To overcome this problem it is merely a case of adjusting the bottom rollers to reduce the amount of play that the door experiences. To do this get a punch and a hammer and gently tap on the bottom of the bolt, causing the roller to get closer to the underside of the gate frame. This process is shown in the below photo. After the gap has been reduced tighten up the nut and bolt to prevent the roller dropping down again.



Models after Nov 2004

Older doors have a series of four rollers and some adjuster bolts on the underneath of the top frame. Ensuring that the gap created between these bolts and the frame do not get very large, will allow the gate to continue to slide easily. If the gap becomes too big then the door will not slide easily. Checking that the gap is maintained regularly will ensure the unit stays at top performance.

## **Service Contracts.**

Should maintenance not be your strongest point or you feel that it may be best to have people which know what they are doing look after your cattle handler, then enquire as to our service maintenance contracts. This service means that for a set annual fee, Technipharm or its agents will maintain the unit to the highest level possible. Think of it like having your car serviced by a mechanic, just a few dollars now may save major frustration in the future.

Service contracts are available for all Technipharm equipment but if you own a major item such as a Handler or Head bail then this contract may be for you.

Do not expect the system to work indefinitely without any attention or care! All machinery does need maintenance including cattle handling equipment.

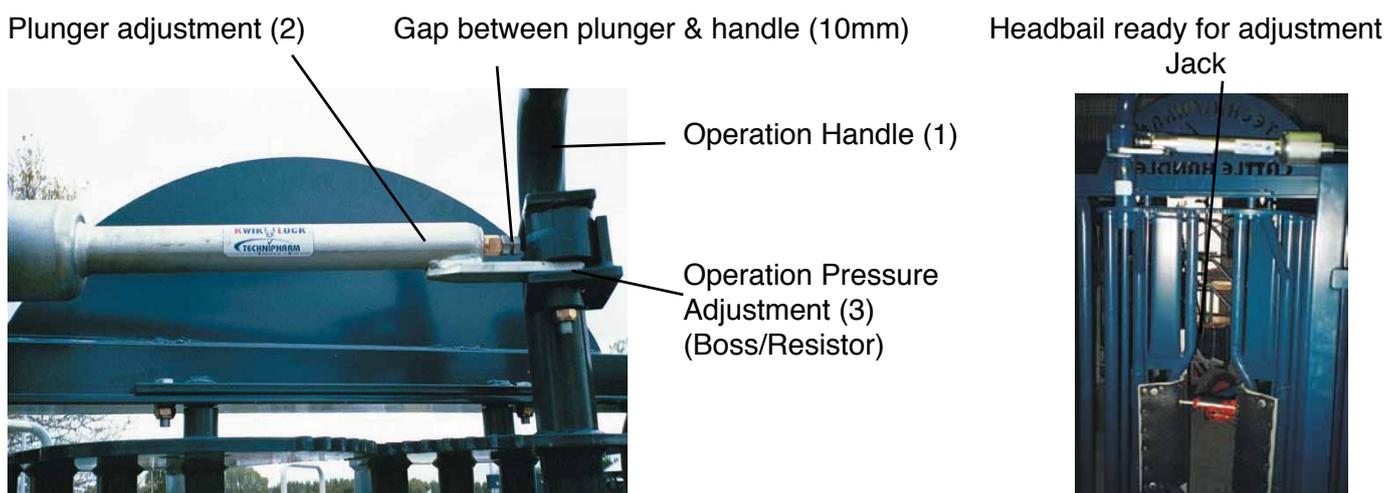
## **Kwiklock Ram Adjustment.**

The kwiklock ram is preset at the factory. This setting is appropriate for most farming operations. However if the plunger (2) has been set a little too short then the headbail will not quite open fully as the blue control handle (1) turns a little bit off center. This means that the handle is right open but the two yokes are not.

By extending the plunger (2) by unscrewing the bolt at the end of the ram, this problem should be easily overcome. Do this by loosening the locknut and then winding out the bolt. Adjust in steps of 2mm at any one time.

Conversely the plunger may have been extended too far at the factory and so the yokes may not hold the animal. Also the ram itself may not lock and so the yokes come open with the animal struggling, As such, simply shortening the plunger (2) may solve the problem. The instructions on how to do this can also be found on stickers attached to the ram. To Adjust: Put a piece of wood or a jack as shown below between the yokes and apply pressure on yokes through the headbail handle. Unlock the lock nut and proceed to wind the lock nut into the housing of the ram till you have a 10mm gap between the end of the plunger and the rotating eye of the handle. Tighten the lock nut back up. Ensuring that this 10mm exists will ensure that the headbail does not open without you opening the head bail yourself. You can test this if you have used a jack as extending the jack will place more sideways pressure on the Kwiklock ram than an animal. If the yokes do not come apart then the headbail is set up ready for work.

\* At all times when working away from the operator handle the secondary safety lock should be engaged.



Over time the shaft of the kwiklock ram will become smoother. This is perfectly normal. This may cause though, the ram to occasionally release as just described. While disconcerting due to the ram working one day and not the next, simply adjusting as described previously should overcome all concerns.

In order to avoid getting scares, like this it pays to get into the habit of regularly checking the ram and the headbail prior to handling cattle. Ensuring that the yokes do not move when exerting pressure to the inside of the yokes is a major part of this. Firstly make sure that the handles last movement has been in a closing direction so the handle is not pressing on the end of the plunger. Then approach the headbail from the rear and try to push the headbail apart.

## **How to care for the Kwiklock Ram**

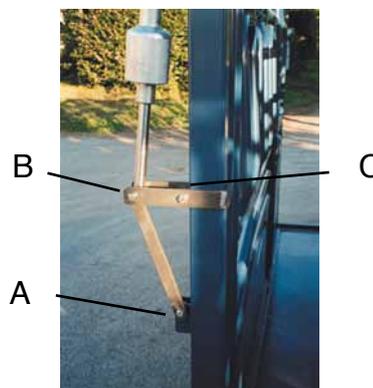
Care for the Kwiklock ram by opening the bail fully when the headbail is not being used for a while to keep the shaft protected from the elements. This will assist in ensuring the ram provides trouble free operation.

## Upgrading older Hydrolock rams to Kwiklock

At times farmers may choose to upgrade their older hydralock rams with Kwiklock models. Headbails with the ram across the top of the unit should present no problems to this upgrade. Units with the ram down the side of the headbail will also require a retrofit kit to be supplied as well. To mount the new ram and kit, remove the old hydralock ram from the headbail. The retrofit kit comprises of a 'U' shaped piece of steel, a piece of plate steel 35 mm wide, and a series of nuts and bolts. These are assembled as shown in the below photo.

The bracing plate is connected to the old ram attachment point (A), while the 'U' shaped piece of steel is positioned so the ram and bracing plate all meet at point B. The ram should then be set up top operate as with the old hydralock headbail.

Bolt C should then be tightened to reduce any movement of the retrofit kit which can reduce the effectiveness of the kwiklock ram.



**Maintenance of Hydralock Rams.**

Below is a diagram of the hydralock ram, some models may differ slightly from this diagram but the principles remain the same. The hydralock ram works on the principal of oil going from one oil reservoir (A & B) to another. The checker valve controlling this oil flow is essentially a ball bearing (G). This is held in the locked position by a spring (F). Releasing the ram to allow it to open is caused by the eyelet of the headbail coming in contact with a plunger (J) and pushing the long rod (K) (plunger) down onto the checker valve (G) to allow oil to flow from the upper to the lower reservoir (A to B).

Split Diagram of typical Hydralock Ram

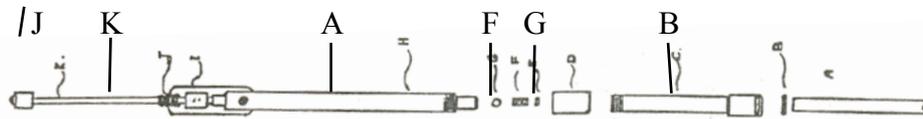
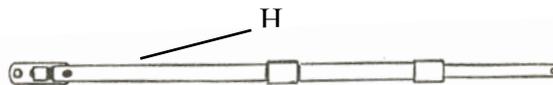


Diagram of typical Hydralock Ram in working set up



Occasionally the hydralock ram may lose its adjustment and the headbail may not fully open. To overcome this it may become necessary to extend rod K.

**OLDER MODELS.**

On older hydralock models this involves removing the ram from the headbail or squeeze, taking care to ensure that rod K does not come out from the body of the ram as oil will run out at this time. Position the ram in a vertical position and gently pull rod K from the body of the ram (H). At the end of the rod is an Allan key slot, using an Allan key extend this out in increments of no more than 3mm as shown in photo A below. After extending slightly, insert pin back into ram and place ram back onto the headbail. If ram still does not allow full opening remove ram and repeat as above.



**RECENT MODELS.**

Newer models do not require for rod K to be removed for adjustment or for the ram to be removed from the headbail. In normal working state the plunger is all locked up as shown in photo B below. To adjust the ram, it is necessary to split the lock nuts using two spanners as shown in photo C, until they appear as shown in photo D. To adjust rod K it is necessary to prevent the lower part from turning. To stop this from turning an Allan key is required to be placed in hole 1, as indicated on photo D to allow the adjustment to occur. You can then turn the end of the plunger into the housing of the ram to extend rod K. Once you have made a number of turns, do the lock nuts back up again and trial headbail. If still not working repeat process.



Photo B



Photo C



Photo D  
(Insert allan key here)

**HYDRALOCK RAM NOT LOCKING**

Typically there are two reason why a ram will not lock. The first is simply a lack of oil in the ram. This may be caused by a number of factors. Simply replacing the oil approximately 20 - 30ml at a time should be able to test this out. The total volume of oil in the ram should not exceed 300ml. The oil used in the ram either as a top up or as a total replacement should be automatic transmission oil. A fine grained hydraulic oil is required due to the nature of the valve system in use within the ram.

The second reason for failure is due to contamination of the oil or damage to the valve. This requires the ram to come in for servicing by our factory to clean out the ram and ensure the valve is in good working order. Call 0800 80 90 98 or email admin@technipharm.co.nz to book a service. Please allow 2-7 days from receipt of order to get you ram back to you.

**Technipharm Mobile Handlers**

Some farmers choose to make their handlers mobile if they have two or more farms where the unit is to be sited. In instances such as these the floor of the trailer becomes the base that the handler sits on. These trailers in turn can be equipped with scales as shown to the right to allow weighing and handling to be conducted any where.

In any transit situation despite the length of the journey the handler should be secured with a number of 2000kg load straps.

Your trailer will arrive on site as shown to the right. Position the handler where it is required. Remove this from the vehicle using the jockey wheel. The trailer is nicely balanced but removing drawbar, care should be taken to ensure that the front of the trailer is supported.

After the trailer is supported with a block, remove the vertically placed pin holding the drawbar in place as shown in photo A below, and pull the drawbar out of the trailer.

With the base support of the jack positioned as shown in photo B below, place the jack into the space where the drawbar was removed and place a pin through the horizontal hole as shown in photo C.



Photo A (Vertical Pin)



Photo B



Photo C Pin

Proceed to raise the front of the trailer, using the wheels as the pivot point until the rear of the trailer touches the ground. Continue raising the front of the trailer until no weight is left on the wheels. You can then pull the pin that is shown in photo D and remove the wheels from either side. You can then lower the front of the trailer until the platform is flush with the ground. Remove the horizontal pin shown in photo C and take away the jack. The handler is now ready to use.



Photo D Pin

## **Installing Smartyards**

Once the Smartyards arrive, carry the panels into their positions and set the yards up. Ensure that panels are all in correct positions and that you are happy with the design. With a can of spray paint mark the panels feet where the dynabolts will be attached, then move the panels slightly sideways so as to be able to drill the holes for the dynabolts as shown below. Alternatively newer systems have slotted holes in panels feet and dynabolts or pins could be drilled and installed in situ.



Insert the dynabolts into the concrete. Lift the panels back onto the dynabolts



Proceed to tighten the nuts down.

A well installed panel and race bow configuration.



## Installing Technipharm gates.

With regard to the gates ensuring they are level, is an important part of trouble free use of the system in the long term. Using a spirit level to make sure the gates are level and swing right around on an even keel is an important step in installing your yards.



Gates are attached to the smartyard panels by use of Elgates. These allow the gate in frame to attach to the panels. These simply clamp together and are secured by a nut and bolt as shown below.



Elgate Connector



Once the gates are in their final position, the elgates are secured by placing a grub screw through each of the clamp plates. This prevents the elgate from swiveling and putting pressure on the rest of the system. This is shown in the photo above.

Where gates need to be lined up with latches (like a camlatch or in gate pin latch or slide pin) the simplest manner in which to do this is to add some galvanized washers under the side of the gate which needs to be tilted. Fit these washers on the dynabolt so that they stay there. This system of alignment can only work on concrete pads

Gate/3 way locking systems, where possible fit all L gates as high as possible on the gate frames, this will provide strength takes out the rattle.

Panels should always be place in a slight curve where possible, this to provide strength and will aid in the cattle behaving better. Where a curve is not possible offset the panels 150-200 mm one way, the next panel the other way. This will make a "straight" line of panels very strong and solid.

In cases where an absolute straight line of panels is desired we can provide on request a triangular outside yard brace, this locks in between the panels and can be dynabolted down on the outside rim of the concrete.



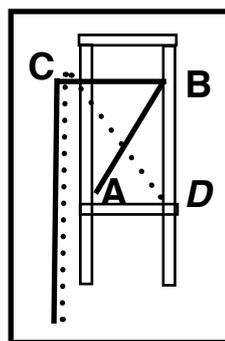
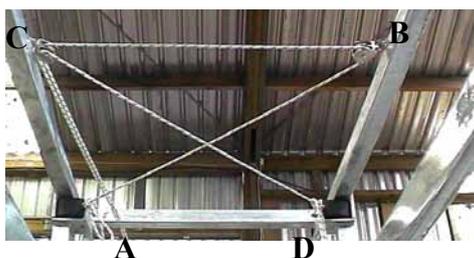
## Installing a Technipharm 3-way drafter

Like Technipharm Panels mentioned in the previous pages, Technipharms Three way drafter should be dynabolted down into the concrete to prevent it from moving as animals knock it.

The next step in installing your drafter is to mount the springs onto the drafting gates. This is best done by placing one end of the spring in the eyelet on the frame. Then inserting a rope through the second end of the spring, extend the spring till the second end is into the eyelet.



For units with a rope and pulley system, setting up the ropes on the top of the drafter is an important step. To work best the ropes must form a cross when seen from above. This can be seen in the diagram and photo below. The first rope should attach to A thread to pulley B then across to C. The second rope should attach to D then cross to pulley C.



After mounting the ropes correctly extend the ropes back to your operation point and mount the pulley in a position suitable as shown in the photo below. Do not cut off the excess length of rope quite yet as the ropes will tend to stretch a little with the first usage. The rope can be cut to its final length after it has been in use for a little while.



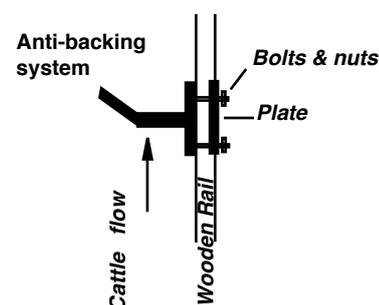
Pulley assembly for wood yards



Pulley Assembly for Steel Yards

## Installing Anti-backing system cattle

After working with your race a little you should learn roughly where cattle get to in the race before baulking. It is in this area where the cattle anti backing system should be installed. Line up where the unit is to be installed and drill two holes of the size of the supplied bolts. Rest the main part of the anti-backing system against the rail and press the two bolts through the race. The second plate then fits over the two bolts and sits on the reverse side of the plank. The bolts can then be tightened home.







# SMARTYARDS<sup>®</sup>



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