



iSHEEP[®]FARM

SUPERDRAFTER 3000TM

INSTALLATION AND OPERATING INSTRUCTIONS



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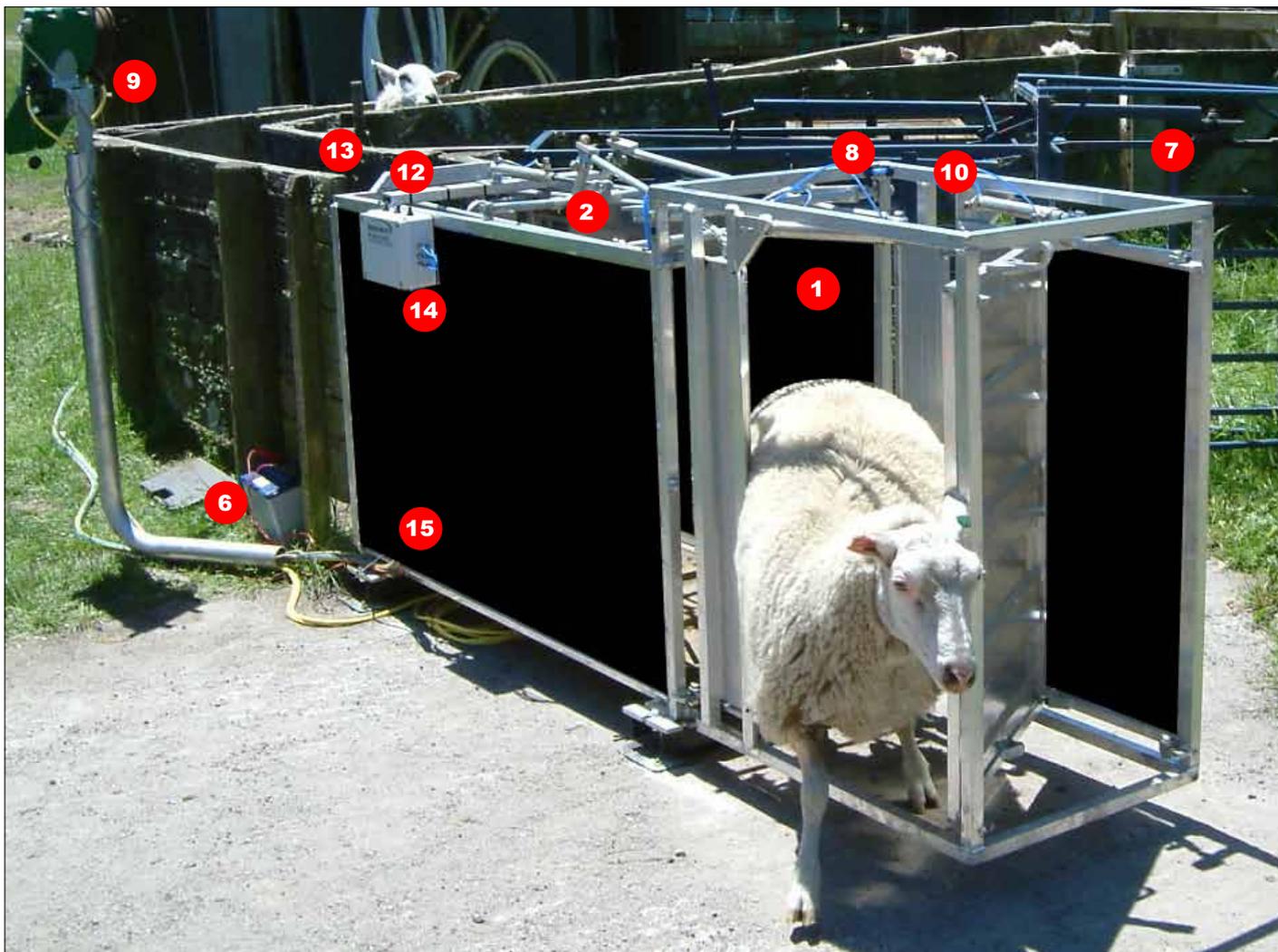
SUPERDRAFTER 3000™

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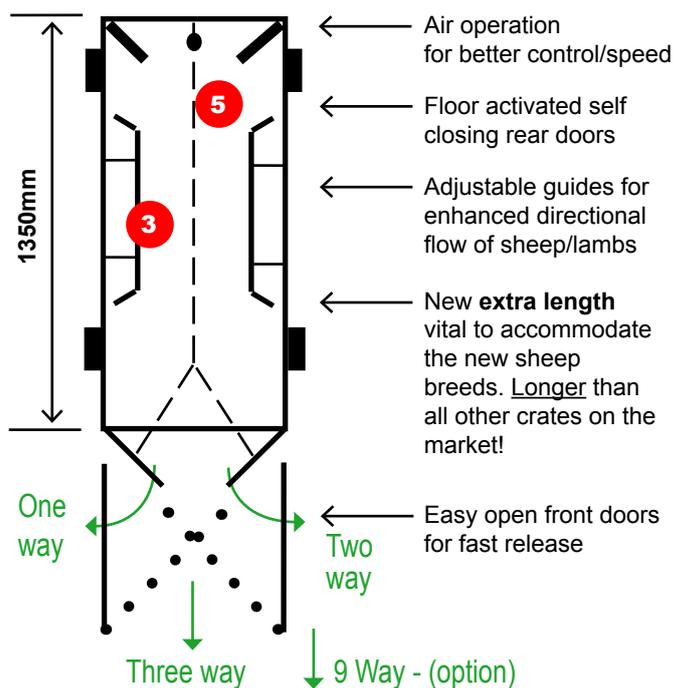
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External Parts - Labelled



- 1** Drafting gates
- 2** Floor Raising springs
- 3** Fully adjustable guide bars
- 4** Weigh bars - not shown
- 5** Drop down floor
- 6** 12v battery to operate drafter module
- 7** Extra long crate
- 8** Side door rams
- 9** Weigh monitor
- 10** Front door ram
- 12** Manual switches for manual override (found on top of grey box)
- 13** Unique self closing rear door for speed handling
- 14** Control box
- 15** Air 'in' hose (Can be moved left or right or underneath)



SUPERDRAFTER 3000™

Installing the Superdrafter 3000™

Before the Superdrafter™ is permanently sited, decide where in the yards the unit is to be placed. Level the ground to ensure that the unit will be stable when weighing animals. Ensure that air hoses are connected properly. The unit arrives with a standard male air coupling so the hose coming from the compressor should be a female coupling. The hose should have plenty of play to ensure that it does not place weight onto the unit.

See the diagram on page 5.

Setting up the Superdrafter 3000™ - step by step

Secure the weigh bars to the Superdrafter

Place the Superdrafter in the position in which it is to be used.

Feed the weigh cables and the amphenol cable through the tube of the weigh stand.

Attach the monitor plate to the monitor stand.

Mount the monitor onto this plate.

Attach the Weigh Scale Controller (Box with switches on the weigh stand) to the monitor stand using the "T" and mounting bracket supplied with the Superdrafter.

Ensure amphenol cable is connected between the air solenoid box (one on the drafter) and the Weigh Scale Controller .

Have this cable running through the monitor weigh stand to ensure the safety of the cable.

Connect the weigh scale controller to the monitor using the RD232 nine pin plug (supplied by TP). This cable goes only into the top of the two monitor ports.

Plug the two weigh bar cables to the monitor.

Ensure that weigh scale controller power lead is connected to a 12 volt battery. (The battery for the weigh scale controller should be fully charged and producing 12V. Any less than 12v and the solenoids will not operate, stopping the drafting gates from operating).

Alternative power supply

The monitor mains power charger, can power the Weigh scale controller if the battery does run out of voltage. If you want to run the Weigh scale controller from mains power on a more permanent basis, please contact us to order an auxiliary power supply for your weigh scale controller unit.

The monitor has its own internal battery source. Provided the unit is fully charged, the monitor should last approximately 6 hours when operating the drafting controls.

Turn the monitor on

Turning on the monitor may cause some of the rams to half open and then close again, This is normal and shouldn't cause concern.

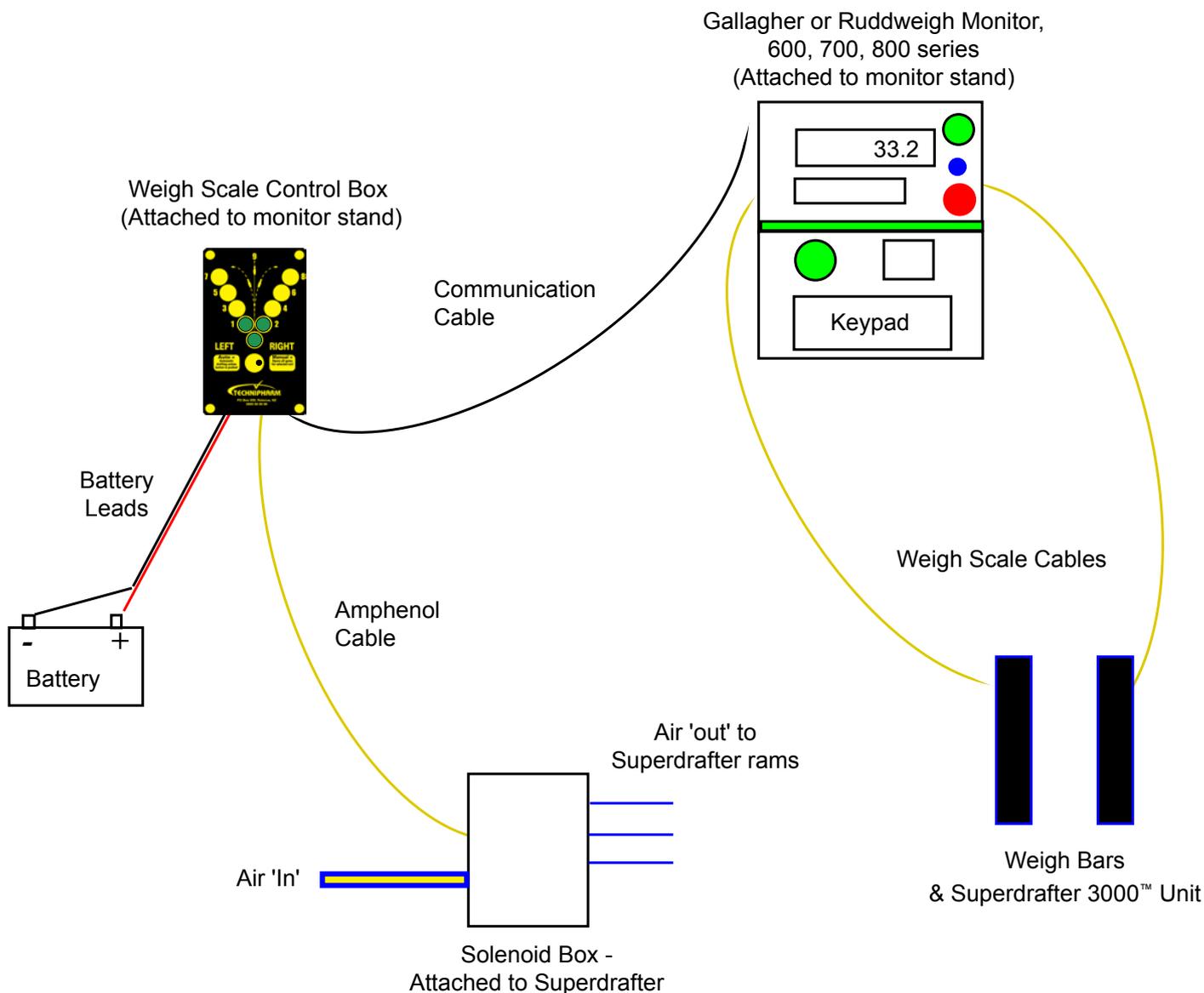
The unit should now be able to be manually operated by using the switches as described on page six.

Operate the switches to test the unit as though you were manually drafting sheep.



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Installation Diagram



Weight on screen & Stats Recording

The monitor stores its stats data in an internal memory. As the sheep enters the crate and its weight is taken (either automatically if set to "A" or by pressing the green button) the red light illuminates and the monitor beeps to tell you the weight has been taken. At this stage the weight of the previous sheep stays visible on the large LCD screen for you to look at, so don't be concerned if you do not see "0.0" on screen, as the sheep leaves. A little box to the side of the weight should display "ZERO". If it does not show zero you may need to push the blue button between the red and green buttons to re tare the unit.

As the sheep leaves the crate and the weight on the system drops by 30%, the weight of the previous sheep is entered into the drafting stats.

After ensuring that the sheep will run easily in to the crate, and that the unit is returning to the tare weight quickly after each sheep, you can begin autodrafting.

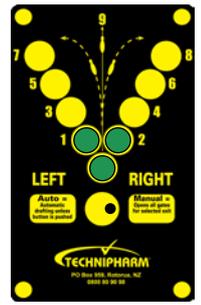
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Testing the Unit

Run a small mob of sheep through the unit, and manually draft. (procedure detailed below).

This is to ensure that the Supadrafter is in a position where the sheep will flow easily.

Ensure after each sheep that the unit is taring (resetting to zero) this can be seen by the Zero function on the monitor.



Manual Drafting

Note: Manual drafting will not be affected by the drafting weights entered into the monitor although any weights taken will be included in the stats record for the mob.

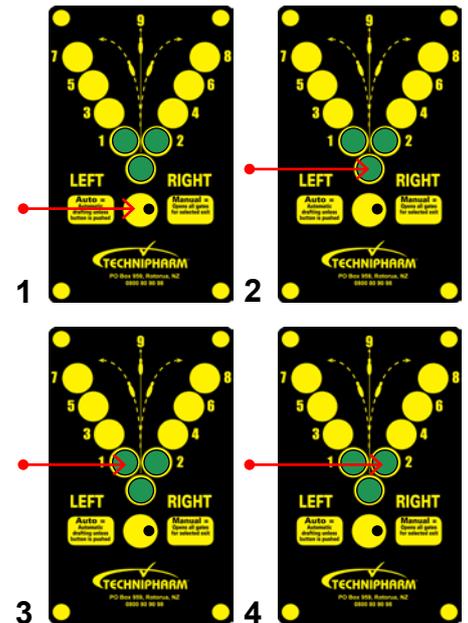
Diagram 1: To draft manually place the rocker switch into manual (right).

As the sheep walks into the unit, the floor drops, the rear door closes and the unit will take the weight and wait for your directions as to drafting options.

Diagram 2: To draft straight ahead, push the lower button and the front gate will open, allowing the sheep to leave. Release the button to close front gate and allow next sheep to enter unit.

Diagram 3 and 4: Drafting to either side. After establishing to which side the sheep needs to go, push and hold button 1 or 2, depending on which pen the gate needs to draft.

The sheep leaves the crate and you can then release the button ready for the next sheep to enter the crate.



Troubleshooting - Manual Drafting

- **If the tare weight of the unit is not returning after sheep has left:**
Check that the crate is level and is not rocking excessively after each sheep.
- **Doors are not operating:**

Battery Connections

Ensure leads are attached firmly to battery and terminals are clean.

Battery Voltage

Technipharm recommends the purchase and use of a brand new battery for use with the Supadrafter to reduce any risk of battery related problems. Battery must be 12v or the unit will not work. Battery must be capable of sustaining charge right through the day. See notes page 4 regarding the use of alternative power supplies

Air Hose

Check that it is connected. Check also pressure of unit, Pressure should be set between 60 & 80 PSI. Check that air is getting from the compressor to the hose. Ensure that the air is getting to the drafting rams, you should not be able to push the gates open with your hands.

Cable Connections

Check lead between the Air Solenoid box and Weigh Scale Controller is connected.
Check lead between monitor and weigh scale controller is secure.

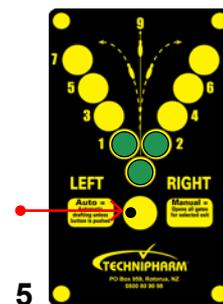
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Auto Drafting

After testing the unit to ensure it is working well manually, You can now set the drafter ready for auto drafting.

Details on how to do this can be found on pages 18 & 19.

The only other change is to set the rocker switch of the grey control box from its manual position used previously for manual drafting to the auto position, as shown in diagram five.



5

Trouble Shooting - Auto Drafting

- **Not Drafting at all:**
Check that battery is connected and that battery is producing 12v
Check all cables are connected in correct ports
Check air connections
- **Weights coming up on monitor screen are not locking into the memory (red light not activating):**
Check that monitors rotation knob is in Auto mode
- **Weights coming up on monitor screen but drafter not autodrafting:**
Check that datalink cable is connected firmly between weigh scale controller and monitor.
Check that bottom switch on weigh scale controller is in auto mode
Check that amphenol cable between weigh scale controller and air solenoid box is connected correctly
Disconnect power to solenoid control box and leave for 30 seconds to reset programming
- **Doors open or close, too fast or too slow:**
Adjustment of air getting to the air rams is required (See page 14)
- **All sheep exiting out one side when unit is in autodraft:**
Check weights entered, by going to set up menu and described on pages 17 & 18
Check which drafting gates are selected, by going to set up menu and described on pages 17 & 18

EID Function

With Electronic Identification of sheep becoming a more realistic option, you may, at some time in the future, integrate your Sheep drafter with EID capability. Speak with your Technipharm Product advisor to see how this advance in technology may be able to be integrated into your Sheep operation and more specifically with your Technipharm Supadrafter.



Fully Equipped EID Supadrafter

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Improving animal flow

The Lead in Race

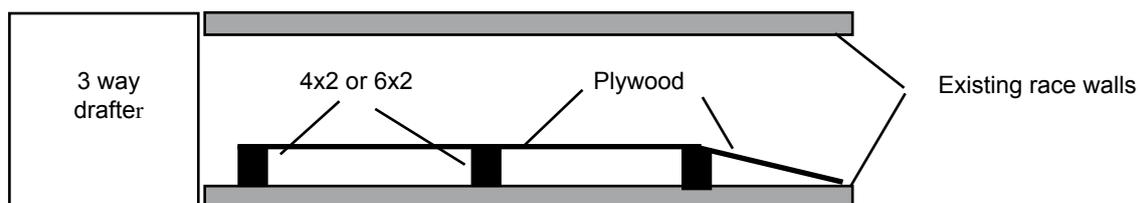
The layout of the lead in race will ultimately determine the flow of animals into the weigh crate and the ease of operation of the sheep drafting unit. A balance of allowing animals to flow into the unit against having them flow too fast into the drafter has to be found. The particular widths and so on will vary depending on farm, breed, the skill of the animal handler and the yard set up

If the sheep move too fast there is potential to have two sheep enter the unit at the same time. Having the sheep move too slow will spend time ensuring flow of animals ultimately increasing frustration. Having a race that is too wide will also slow the flow of animals into the Drafting unit, as smaller animals i.e. lambs can turn around and cause problems.

Race filler

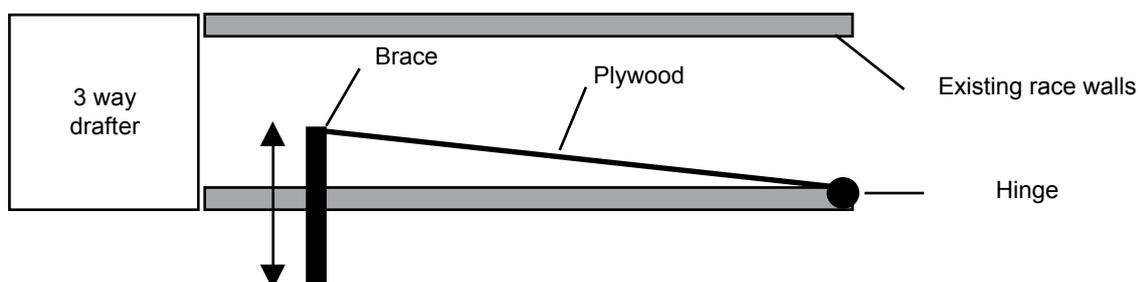
To overcome the problem of race width, Technipharm suggests the use of a drop in panel. This may consist of a sheet of H3 treated plywood with some 4x2 boards as spacers (as seen in the below diagram) to cut down the width. This can then be inserted near the head of the race when smaller animals such as lambs are being drafted

Note if the race is especially wide or the lambs being weighed are small then a second insert with 6x2 rather than 4x2 may be required as well.



Bayonet Squeeze

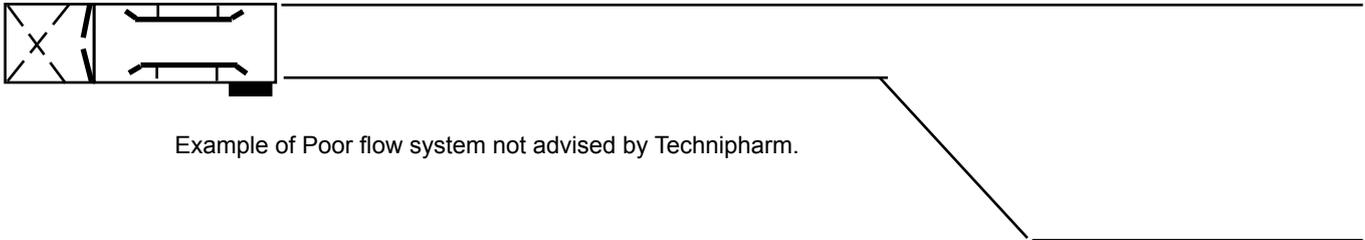
Some farmers also find it possible to have a bayonet system (as shown below) where by the width of the race can be set to the particular size of sheep that are to be weighed. The system is similar to the above system, except that one end of the infill is attached to the wall by a hinge. The other end is then locked by some form of a brace which can be variable. This allows more control over the width of the race than the above option but is slightly more complicated to set up.



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Curved entry way

If the sheep are moving too slowly into the drafter it will generally be because the sheep are able to see the sheep in front and are not being drawn forward. Sheep will generally flow better if the sheep they are following leaves its field of view, then the second sheep will follow in order to keep the first sheep in sight. A long straight race, like the one shown below, leading directly to the drafting unit where the sheep can see the one in front will not encourage movement.

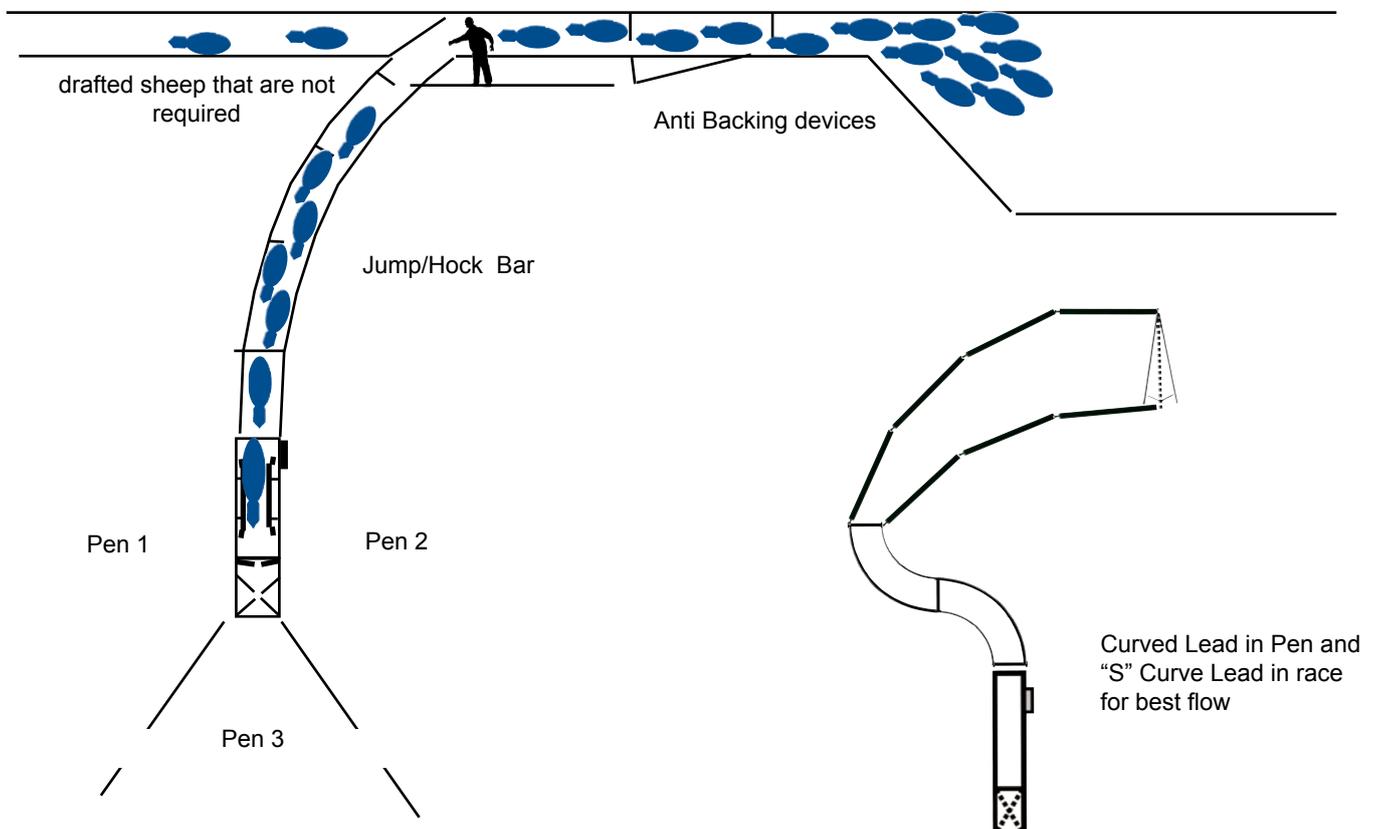


Example of Poor flow system not advised by Technipharm.

TechniPharm encourages the siting of the Supadrafter as shown in either of the diagrams below.

If the site allows, have a reasonably long curved lead in race to the drafter, so several sheep can be waiting to go into the drafter. Having a drafting gate at the head of this curved race will allow nonconforming sheep to be drafted off and not having to go through the drafter. This may be the ewes in a mixed mob of ewes and lambs when lambs are to be weighed. This drafting gate can greatly increase the flow of sheep through the yards as not every sheep is required to go through the drafter.

Alternatively a curving lead in pen with TechniPharms "S" curving race may be of benefit for optimum sheep flow

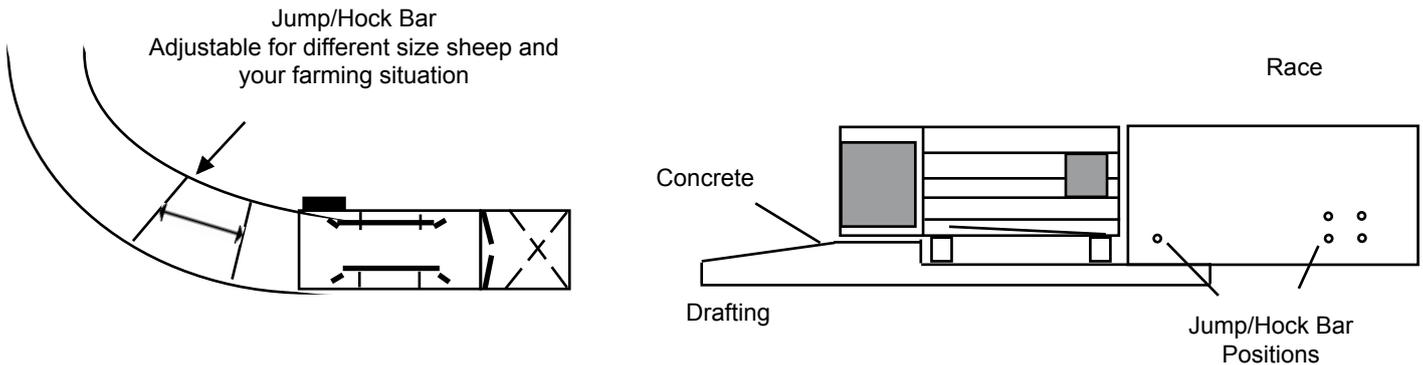


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Jump/Hock Bar

If the sheep are flowing too fast then inserting one or more jump/hock bars before the drafting unit in the race so that the sheep cannot run straight into the unit will help prevent two sheep entering the drafter at a time. The placement of this bar will change with different farming situations.

Some farmers suggest that the bar should be placed so that one sheep can be ready to enter the drafter,



Anti-Backing system

To assist in keeping the flow of sheep to the drafter, Technipharm advises that some form of anti-backing system is installed down the length of the race. These are available from different sources but Technipharm does produce an effective anti-backing device.

The distance of these apart should allow between 2-4 animals between the anti-backing system as this encourages a little packing of sheep while encouraging sheep to keep moving rather than standing in one place too long.

The anti-backing system should also be height variable to allow for different sizes of sheep.



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Permanently Siting the unit

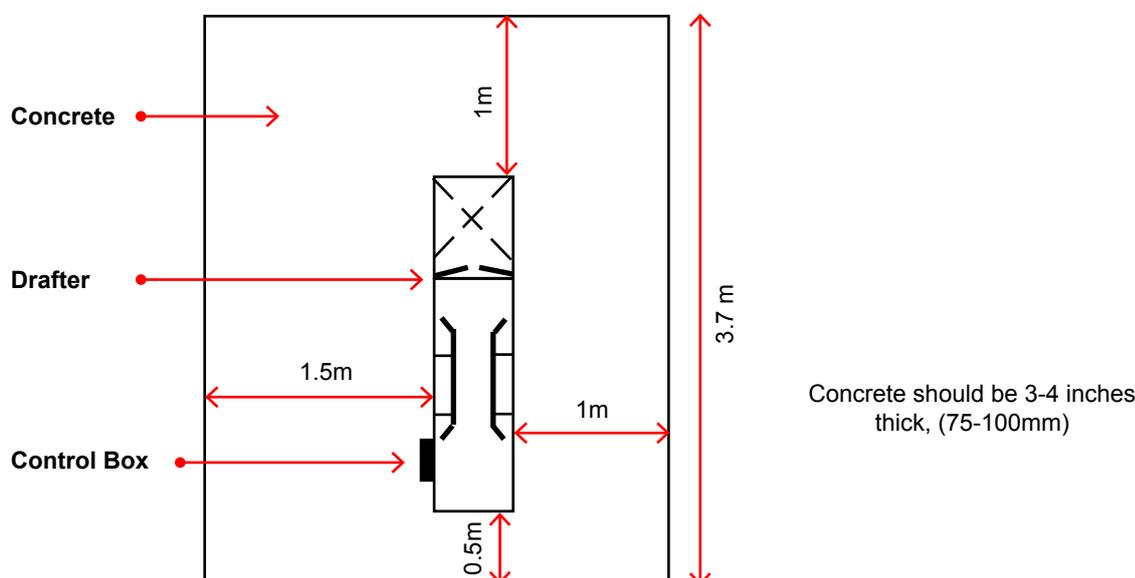
After ensuring that the unit is sited in a position where animals will flow in the desired manner, it is advisable to place the unit on a concrete pad and bolt it down permanently.

There are a number of reasons for siting the supadrafter on a concrete pad. The first is that when the sheep are exiting the unit they will be twisting on their hooves and this will cause holes to develop. As time progresses, these holes deepen, and the sheep will gradually become more reluctant to leave the unit ultimately slowing weighing down.

Secondly placing bars on the concrete will minimise the movement of the bars and reduce long time wear and tear on the weigh bars.

Thirdly concreting the area will help ensure maximum accuracy and ensure weighing is as fast as possible with little down time waiting for the unit to re-tare.

The size of the concrete pad is up to personal preference but Technipharm advises that the pad should extend out as in the diagram below.



The reasons for these dimensions is to allow the sheep to leave the unit entirely before it reaches the edge of the concrete. Most sheep will hesitate a little before changing surfaces. By having the sheep completely out of the unit before they hesitate allows the next sheep to be getting weighed as the first sheep is making up its mind to leave the platform.

The reason for the wider width on the control box side is to allow the farmer to work on this side of the control box with out the risk of tripping on the lip of the concrete. The reason for extending the concrete behind the unit is so that the sheep baulk a little behind the unit so that they are not approaching the unit at too much speed.

A further idea to consider when laying the concrete is to raise the area where the drafting portion of the unit is situated. This is shown in the diagram to the right, This is so the sheep do not hesitate as they leave the drafting unit, ultimately resulting in better animal flow.

After the concrete pad is laid, place the weigh bars where they will be permanently sited. Sit the supadrafter onto the bars in order to get them lined up. Once you determine where the bars will be placed, you can mark the holes, and proceed to dynabolt the weigh bars down into the concrete. This should prevent any movement of the bars and provide as stable base as possible for the load bars to work from.

The weigh crate can then be bolted onto the weigh bars. There should be no movement in the crate to disrupt the weighing process. If there is any movement, check the unit and use slivers of solid material to minimize this movement further.

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Superdrafter 3000™ adjustments

Floor raising springs

(located near the front of the unit)

These springs return the floor to its angled position as the sheep leaves, allowing the back door to open for the next sheep to enter the unit. At the factory these springs are often set at the slackest position to avoid stretching during transit. This may result in the floor raising too slowly.

To speed up the floor raising, tighten the spring. Do this by moving the bottom hook further down the holes in the plate. These holes can be seen in the image below right.

One point to note is that if the springs are too tight then lighter lambs may not have enough weight to cause the floor to drop especially if they stay near the rear of the unit. So if light lambs are being weighed it may in some cases pay to reduce the spring tension in order to ensure animal flow. If the rear doors are not closing fully please loosen these springs to allow gates to close more easily.



Spring



Holes in plate for altering spring

Manual drafting switches

(located at the top of the Weigh Scale Controller Box)

The autodrafter also has a manual override for when sheep may be needed to be drafted on weight or condition score. These switches are found on the top of the Weigh Scale Control Box.

Note: Drafting manually will not be affected by the drafting weights entered into the monitor. To record weight stats the monitor must be set to auto to enter the weights into its memory, or you can press the green button if monitor is set to manual mode.

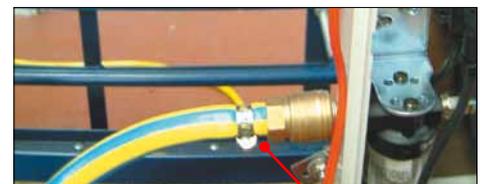
The drafter will only auto draft if Weigh scale control box is set to Auto.



Weigh scale control box

Air 'in' hose

For optimum results, the air pressure should be operated at 60-90 PSI.



Air 'in' hose

Guide Bars

The guide bars allow for a faster flow of animals by preventing the animal moving and turning around. An animal that is given too much room will add delay to the time it takes for a stabilised weight to be taken.

Extend the bars to avoid animals turning around in the unit or for smaller sheep. Retract them when larger animals are being drafted to allow the sheep to enter the unit easily.

Adjustment is carried out by simply rotating the wing nuts.



Guide bars



Wing nuts

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Drafting Gates

Drafting gates are factory set and may differ from on-farm requirements.

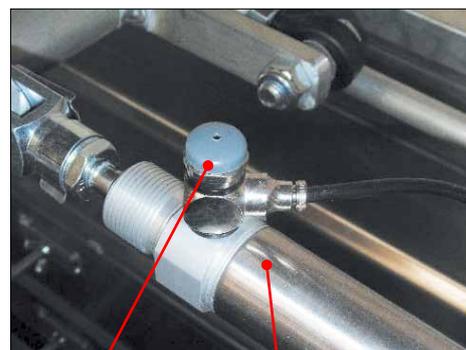
Changing the drafting gates settings is easy see Pages 18 &19 on how to do this.

Ram speed

Occasionally the speed of the rams may need to be adjusted in order to speed up or slow down the opening and closing speed of the rams. This speed adjustment is done on the ram itself where the air hoses enter the ram.

The hose into the front of the ram (where shaft comes out) controls how fast the door opens, while the hose into the rear of the ram controls how fast the drafting gate closes.

1. Work out which function and ram you want to adjust.
2. On the top of the elbow where the hose enters the ram, there is a small plastic cap. Prise this off with a small flat head screw driver.
3. This then exposes a small screw flat head screw.
 - i Wind this screw in to slow ram down.
 - ii Wind it out to speed the rams up.



Plastic Cap Ram

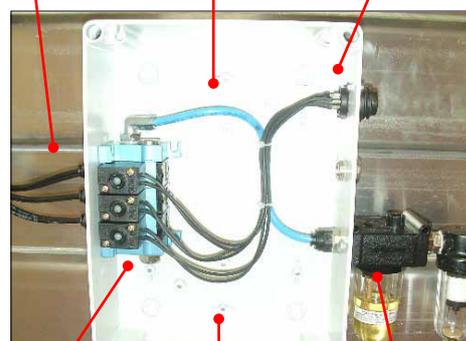
Solenoids

(located within the air solenoid unit)

These control the opening and closing of the drafting gates. These solenoids require a minimum of 12V input.

The weigh scale controls are connected to a battery. It is very important that the battery is producing 12 volts or else the unit may not perform at its optimum level.

Air hoses 'out' - To Rams
Air Distribution line
Amphenol cable in



Solenoids Air Solenoid unit Air hose 'in'

Weigh Scale Control Box

This unit contains delicate electronics. Under no circumstances should this be opened except by a Technipharm authorised agent. Failing to follow this instruction will void any warranty claims.

This control box is designed as a completely stand alone unit. If servicing is required, this will commonly be the only portion of the system which will need to be returned to TechniPharm.



Weigh scale control box

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Tare the unit

Tare the unit manually by pressing the tare button (the small blue button) on the monitor.

This can be done at any time. The monitor also has its own self taring feature to zero off any small weight changes due to faeces dropped on the unit.



Condensation release valve.

(located near the air 'in' hose on the air solenoid unit)

It is inevitable that some moisture will be in the compressed air that operates the system. To allow removal of this water, Technipharm has installed a condensation collection device as the air enters the unit. This device requires the moisture to be released at regular intervals to ensure optimum operation of the unit. The release valve can be found on the under side of the grey control box. Pressing this approximately once every thousand sheep or so should be sufficient to keep the drafter performing at its optimum levels.

NOTE: In humid conditions, increase this release of moisture to once every 500 sheep.

After you have finished your weigh session, dewater your compressor after each use.



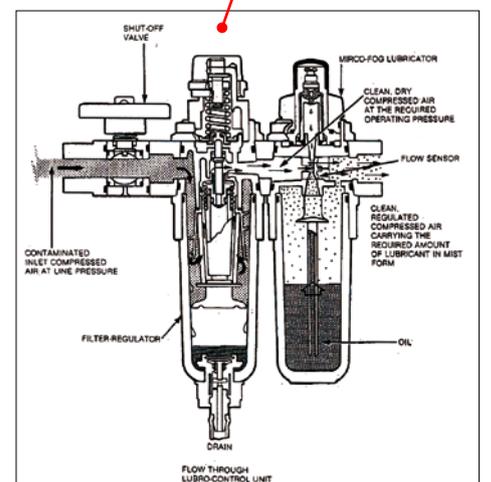
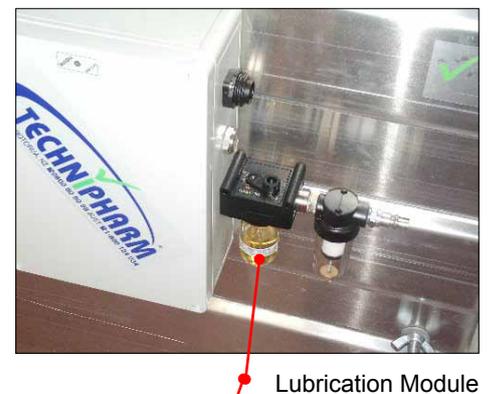
Lubrication Module

To overcome possible corrosion of the valves in times when the unit is not in use, there is a self lubricating distribution kit. This will periodically give a mist of oil to the pneumatics of the unit.

Occasionally this will require you to top up the oil.

Due to the nature of the lubrication module - Use only one of the following four lubricants.

- | | |
|------------------------|---------------------|
| Castrol Hypspin | AWS10 |
| BP | HLP 10 (150) |
| Mobil | DTE 155 |
| Shell | Tellus 23 22 |



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Setting the drafter for Auto Drafting

The first step is to tell the monitor that it is talking to the Technipharm Sheep SupaDrafter 3000™

1. Set Port One to Drafter Special
2. Rotate the "Rotary Knob" to the "S" setting.
3. Push the left set up button (DOWN ARROW) until you get to 5: Communications
4. Push the right set up button (SELECT)
5. Ensure Port One is selected by using the up & down arrow
6. Push the 2nd set up button from the left (CHANGE) until you get to "Drafter Special"
7. Push the right set up button (OK)
8. The screen should now read again 5: Communications

Next, set the unit up for your specific drafting requirements :

9. Continue to have the unit in "Setup" mode.
10. Use the second button from the left (UP ARROW) until you get to 1: Draft Menu
11. Push the right set up button (SELECT)
12. If the top line of the bottom screen does not read "THREE WAY DRAFTING" then scroll through the options by pressing the "MODE" set up button (2nd from right)
13. Click OK once "THREE WAY DRAFTING" is on screen.

Setting your drafting options

For detailed directions on how to change figures and drafting options please refer to the 600/700/800 instruction manual in the set up section. Please find below examples of how gates may be set up.

You can now set the gate and weight options. For the sheep drafter:

"5" Operates the Centre and Left gates

"4" Operates the Centre Gate Only

"6" Operates the Centre and Right Gates

One major attraction of the controlled system is the flexibility in moving lambs around through your three drafting pens.

Example:

If you wish to draft animals above 40kg to the right, between 30 & 40 straight ahead, and under 30kg to the left, then set up the gates to read as shown here on the right:

THREE WAY DRAFTING		
H Gates	6	
Upper Limit	40 kg	
C Gates	4	
Lower Limit	30kg	
L Gates	5	
	MODE	OK

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Another Example:

If you wanted to draft the sheep as follows:

Above 45kg to the left, under 35 kg straight ahead and between 35 & 45kg to the right then set up the gates to read as shown here on the right:

THREE WAY DRAFTING		
H Gates	5	
Upper Limit	45 kg	
C Gates	6	
Lower Limit	35kg	
L Gates	4	
	MODE	OK

Two Way Drafting

If desired you can select two way drafting instead of three. The autodrafter interprets data a little differently to the supply of information from the monitor. This means that although the data can come from the monitor the drafter is incapable of drafting when in two way mode. To draft two ways then we use the three way drafting option in the monitor and set different weights.

Example:

1. Rotate the "Rotary Knob" to the "S" setting.
2. Use the second button from the left (UP ARROW) until you get to 1: Draft Menu
3. Push the right set up button (SELECT)
4. Ensure "Three way drafting" is selected You can now set the gate and weight options.

So if you are drafting ewes or hoggets over and under 45kg you would set the system as shown here.

THREE WAY DRAFTING		
H Gates	5	
Upper Limit	300 kg	
C Gates	4	
Lower Limit	45kg	
L Gates	6	
	MODE	OK

Should you need any more detailed instructions please refer to your 600/700 Manual.

After setting the weights and gates to your desired weight ranges, set the rotation knob to "A" to begin automatic drafting.

SUPERDRAFTER 3000™

Handy Monitor Functions

1. Real live time drafting statistics on screen

This allows you to monitor at a glance the weights and proportions of animals been weighed at any time. Refer to the monitor 600/700/800 series instruction booklet for more details on how to do this. - Viewing session statistics

2. Estimated Carcass Weight Feature

Another function within the monitor is been able to set a dressing out percentage and calculate an estimated carcass weight value of the mob you are drafting - Refer to the monitor 600/700/800 series instruction booklet for more details on how to do this. - Viewing Weighing details within a session

3. Viewing individual weights within a session

Another function within the monitor is being able to see all of the weights of the sheep weighed within the session. Refer to the monitor 600/700/800 series instruction booklet for more details on how to do this. - Viewing Weighing details within a session - Weight Records

4. Checking/Modifying records within the weigh session

At any time we can go back and check any weight within the drafting session and modify or delete that record if required,

- i. One of the advantages of this is that if we see a ewe lamb in a wether mob then we can go back and delete that animal from the stats,
- ii. Also if we get two lambs entering the crate, then at any time we can take that "animal" off the stats so as not to get an increased weight over the group average

Refer to the monitor 600/700/800 series instruction booklet for more details on how to do this. - Weighing animals Section

5. Tracking individual weights of a lamb

It may also be that within a group of lambs you have a few sheep that are individually identified as reference sheep. If you see these coming in the race, you can enter their ID and have these recorded to the session. This then gives a clear picture as to the individuals within the mob and how they are doing. Refer to the monitor 600/700/800 series instruction booklet for more details on how to do this. - Recording Animal Information.

6. Ability to better control the drafting gates

This allows you to have increased options for rotating lambs around pens,

- a. One example of this is that if you want heavy lambs to go to the left to be sent round again, you just set the monitor, Then the next time you want to send the heavy lambs to the right, you can just reprogram the monitor accordingly.
- b. Directions on how to do this can be found on Page 18 & 19

7. Improved labelling of the same group of lambs

With this monitor we can label a group of lambs as "Jones ewe" lambs, this weigh session then gets stamped with the date and time. When next these lambs come through they can then be relabelled "Jones ewe" lambs and again the date and time gets date stamped on that session. This allows us to compare the same group of lambs, and their group statistics, via your MyScale Pro computer program supplied with your monitor.

8. Improved division of groups of lambs on the same day.

Each time when you finish with one group of lambs we only need to press one button to start the next group of stats for the next mob. All sessions are kept within the monitors memory and are date and time stamped, so that we do not lose for good the previous mob, even if we do not label the group with a name, (Just make sure that the date and time are set correctly in the set up menu #4 Set Time & Date.) This means at any time we can go back and see the stats of a group of lambs. It also means that we can download that information to a computer at any stage as individual groups of lambs.