## Single wall mount <br> This photo shows the

 side of the OptiMizer that will be mounted to the wall. There are 3 Upper Mounting locations (circled black) and 3 Lower Mounting locations (drilling dimples circled in red).

## A lower mounting block will be needed to brace the side of

 the feeder in the lower position.Suggested dimensions are $18^{\prime \prime}$ long, $3.5^{\prime \prime}$ wide, 3 " thick.
The photos below show a lower mounting block made from a $2 \times 4$. (A $2 \times 4$ is actually about $1.5^{\prime \prime} \times 3.5$ ". So the board was doubled on the ends to make it $3^{\prime \prime}$ thick and then mounted per the guidelines below.)


Determine the location of the OptiMizer with the horseproof latch in the corner. Ensure that the latch will open and close in this position. Ensure that the feeder is positioned to eliminate the chance of entrapment between it and the other wall. Mounting blocks may be needed to achieve the minimum insertion depth of the fasteners or work around other common obstacles often encountered with carpentry.

Set the feeder at its desired height in the corner. Individual circumstances vary and heights should be considered to optimize feeding and safety.

Mark on the wall to record the top and sides of the feeder so that you can position the lower mounting block. The location of the inside mounting dimple is 14 " down from the top and 8-1/2" from the inside. Position your mounting block so it will adequately contact all 3 dimples of the feeder. Attach it securely to the wall. See Table 2 for drill bit sizes and fastener suggestions.

Pre-drill all of the holes in the feeder that will be used in mounting. See the drill bit size recommendations Table 2.

Place the feeder in its final location, as level as possible and using it as a guide, drill one pilot hole into the wall through the top hole closest to the latch. See Table 2 for drill bit size recommendations. Lightly mount the feeder to the wall with one fastener/washer.

Use a level to pivot the feeder into a level position Then pre-drill and install the fastener/washer through the top hole furthest from the latch. Pre-drill and install all the remaining top fasteners/washers. Install all $\mathbf{3}$ fasteners in the lower position. If needed, place shims between the Optimizer and wall to keep the plastic from being distorted by the fasteners. Ensure all the fasteners are equally snug.


This photo shows the inside of a feeder mounted on a single softwood wall, next to a rock wall.

| Table 2 <br> Suggestions for Upper Position | One Wall Corner Mount |  |
| :---: | :---: | :---: |
|  | Common Materials used in Stable Walls |  |
|  | Wood | Concrete; poured or block |
| Suggested fastener | $114^{\prime \prime} \times 2^{\prime \prime}$ lag screw | $3116^{\prime \prime} \times 2-144^{\text {" }}$ Tapcon |
| Suggested washer | Minimum 3/4*OD Washers are suggested foreach fastoner |  |
| \# Needed in each upper rim location | 1 in hardwood, 2 in softwood or plywood | 1 |
| \# Needed for upper position | 3 in hardwood, 6 in soft wood \& plywood | 3 |
| Drill bit size to drill holes through feeder at upper dimples | $1 / 4^{\prime \prime}$ | 5/32" |
| Drill bit size for pilot holes | 5132" hardwood, $3 / 32^{11}$ softwood or olvoood | 5/32" masonry bit |
| Minimum embedment of fasteners | $1^{\prime \prime}$ | $1{ }^{1 \prime}$ |
| Suggestions for Lower Position |  |  |
| Suggested fasteners to attach mounting block to wall | \#10 X 4 flat head wood screws | 3/16" X 4-1/4" Tapcons |
| \# of fasteners to mount block to wall | 4 for hardwood, 6 for soft wood and olveood | 4 |
| Drill bit for pilot holes through lower block | $316^{\prime \prime}$ |  |
| Drill bit for pilot holes in hardwood wall | $13164^{\prime \prime}$ |  |
| Drill bit size to drill holes through feeder at lower dimples | $1 / 4^{\prime \prime}$ |  |
| Suggested fasteners to attach OotiMizer to mountina block | $3 \times 1 / 4^{\prime \prime} \times 2^{\prime \prime} \text { lag screws with } 34^{\text {n }} \mathrm{OD}$ |  |

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## OptiMizer ${ }^{\circledR}$

The healthy hay feeding system

## Installation Guidelines

Intermediate carpentry skills and appropriate tools are required to install the OptiMizer. It is critical to mount the OptiMizer on strong surfaces and to use appropriate fasteners for the materials and their thickness. Before drilling any pilot holes or installing any fasteners, confirm that the fasteners will not project through the wall material, puncture waterlines, contact electrical wiring and/or create a risk to humans or animals.

The OptiMizer was designed to be securely mounted in a corner to maximize horse safety.

The OptiMizer can be mounted on one or two sides. Guidelines follow for both options.

Given the multiple options and surfaces possible in barns and paddock, you may need to provide fasteners and materials for mounting blocks, shims and/or structural alterations.

The most common installation is a two wall corner mount on solid, wood boards with minimum thickness of 1-1/4". The fasteners have been provided for this configuration: 6 lag screws (1/4" X 2") and 6 washers (3/4" OD).


The owners and employees of Wishing Well Services Ltd. are not responsible for injury or damage of any kind that may result from installing and using the OptiMizer.

## OptiMizeR

## The healthy hay feeding system

 The Optimizer was designed to be mounted in a corner to maximize horse safety. It is critical to mount the OptiMizer on strong surfaces and to use appropriate fasteners for the materials and their thickness.
## Where to mount? How high?

Some considerations for choosing the location to mount the OptiMizer:

- Which corner would be optimal for the horse to be standing at for long periods of time while eating?
- Which corner offers a good surface with strong materials and is safe for mounting?
- Which spot works well for daily care and maintenance (adding hay, cleaning, supplying water, feeding grain, movement etc.)

Also determine what mounting height would be optimal. Consider the size of the horse, safety, practicality, forage height preferences etc.

- OptiMizers can be mounted from the ground (lip height about 22") to as high as needed. If mounting low, we suggest it is a few inches off the ground so you can clean under the manger.
- In our testing, most of the prototypes were mounted at a lip height at about $34^{\prime \prime}$ by stabilizing the OptiMizer on a bale of hay while mounting.

A bale of hay was used to set the height of the OptiMizer at a lip height of 34 " which was good for this 15 hand horse.
This was a two wall corner mount in an older barn with horizontal spruce board walls. There was an obstruction in the corner, so a $2 \times 10$ mounting block was installed for the upper rim to bump that side out of the corner. The corner was not square, so shims were needed.


This photo shows the OptiMizer with the horse-proof latch indicated by a red star. The latch should be positioned in the corner, furthest from the horse. There are 3 mounting locations along the upper rims of the 2 sides of the corner (circled in red). There are 3 dimples in each position, so you can choose the ones that best align to the mounting surface.



This is an example of an installation on vertical hardwood boards. The outer dimple in the 3rd location was chosen to avoid the gap between the boards.

## Guidelines for two wall corner mount:

Determine the location of the OptiMizer with the horse-proof latch in the corner. Ensure that the latch will open and close in this position. and that the corner is square. Mounting blocks and/or shims may be needed if the corner is not square or if there are obstructions. Mounting blocks may be needed to achieve the minimum insertion depth of the fasteners or work around other common obstacles often encountered with carpentry.

Set the feeder at its desired height in the corner. Individual circumstances vary and heights should be considered to optimize feeding and safety.

Pre-drill the holes in the feeder that will be used in mounting. See the drill bit size recommendations in Table 1.

Place the feeder in its final location, as level as possible and using it as a guide, drill one pilot hole into the wall through the top hole closest to the latch. See Table 1 for drill bit size recommendations. Lightly mount the feeder to the wall with one fastener and washer.

Use a level to pivot the feeder into a level position. Then predrill and lightly install the fastener/washer through the top hole furthest from the latch on that side.

Use the level on the other side, and once level, pre-drill and install the fastener/washer in the hole furthest from the latch on that side.

Pre-drill and install all the remaining fasteners/washers on both sides.

Ensure all the fasteners are equally snug

| Table 1 | Two Wall Corner Mount |  |
| :---: | :---: | :---: |
|  | Common Materials used in Stable Walls |  |
| Suggestions for Upper Positions | Wood | Concrete; poured or block |
| Suggested Fastener | 1/4" $\times 2$ " lag screw | $3 / 16^{\prime \prime} \times 2-1 / 4^{\prime \prime}$ <br> Tapcon |
| Suggested Washer | Minimum 3/4" OD Washers are sugge sted for each fastener |  |
| \# Needed in Upper Rim Location | 1 | 1 |
| \# Needed per Side | 3 | 3 |
| Drill Bit Size to drill holes through feeder at dimples | $1 / 4{ }^{\prime \prime}$ | 5/32' |
| Drill Bit Size for pilot holes in wood | 5/32" hardwood, 3/32" softwood or olwwood | 5/32" masonry bit |
| Minimum Embedment of Fasteners | $1{ }^{\prime \prime}$ | $1{ }^{\prime \prime}$ |



