



Climate
Control
Systems

a nebula group company

GREENHOUSE VENT SYSTEMS

RACK AND PINIONS

Our rack & pinions are designed to deliver high performance and long life.

MATERIALS

High performance, non-corrosive, aluminum alloys are chosen for their strength and durability. Rollers, sliders and bearings are made from nylon based polymers to give high wear resistance and extended performance.

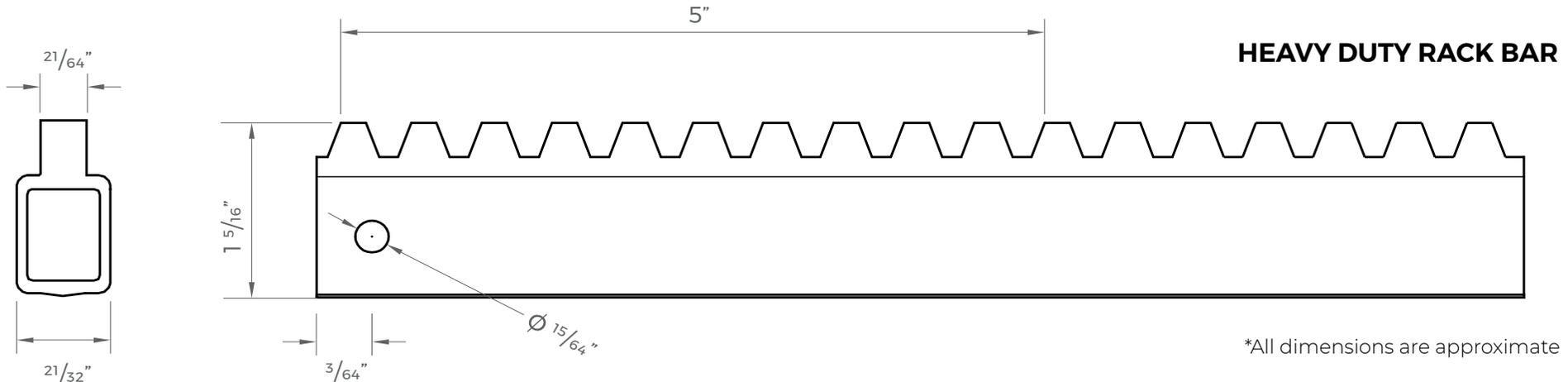
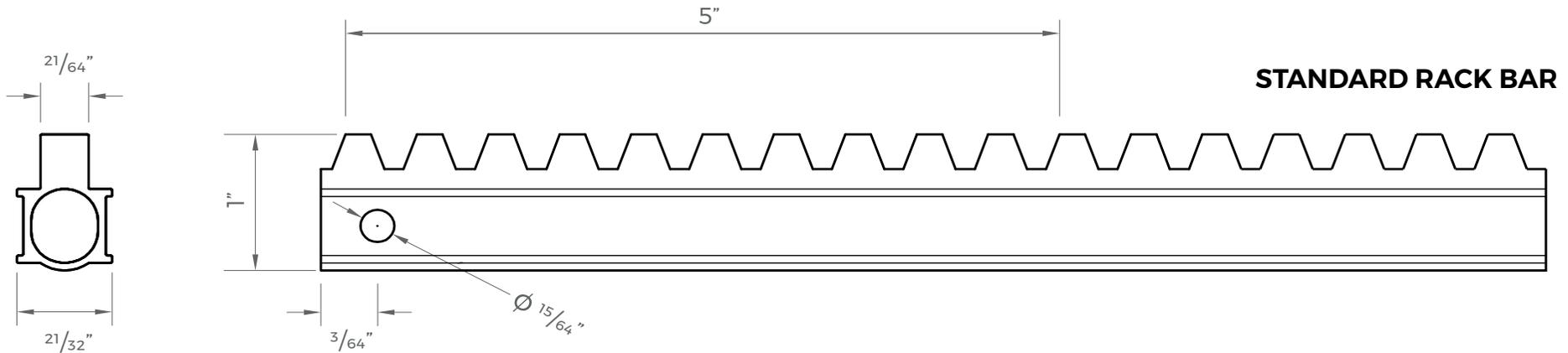
- ✓ PINIONS TO FIT 1³/₈" AND 1⁵/₈" SHAFT SIZES
- ✓ HIGH STRENGTH TO WEIGHT RATIO
- ✓ ALUMINUM CONSTRUCTION
- ✓ SUPER STRONG
- ✓ ANY RACK LENGTH FROM 18 TO 84"
- ✓ CUSTOM CURVE FOR YOUR PROJECT
- ✓ CURVE WITH TEETH ON OUTSIDE OR INSIDE
- ✓ SMALLER P.C.D. FOR REDUCED TORQUE



RACK BARS

Aluminum racks are manufactured in any length from 18 to 84" and may be curved to suit the specific requirements of your application. The racks can be curved with the teeth on the inside or outside of the curve. The rack bars are available in a standard design with a strength of 65lbs (300N) and heavy duty design rated at 150lbs (700N) when straight and 130lbs (600N) when curved.

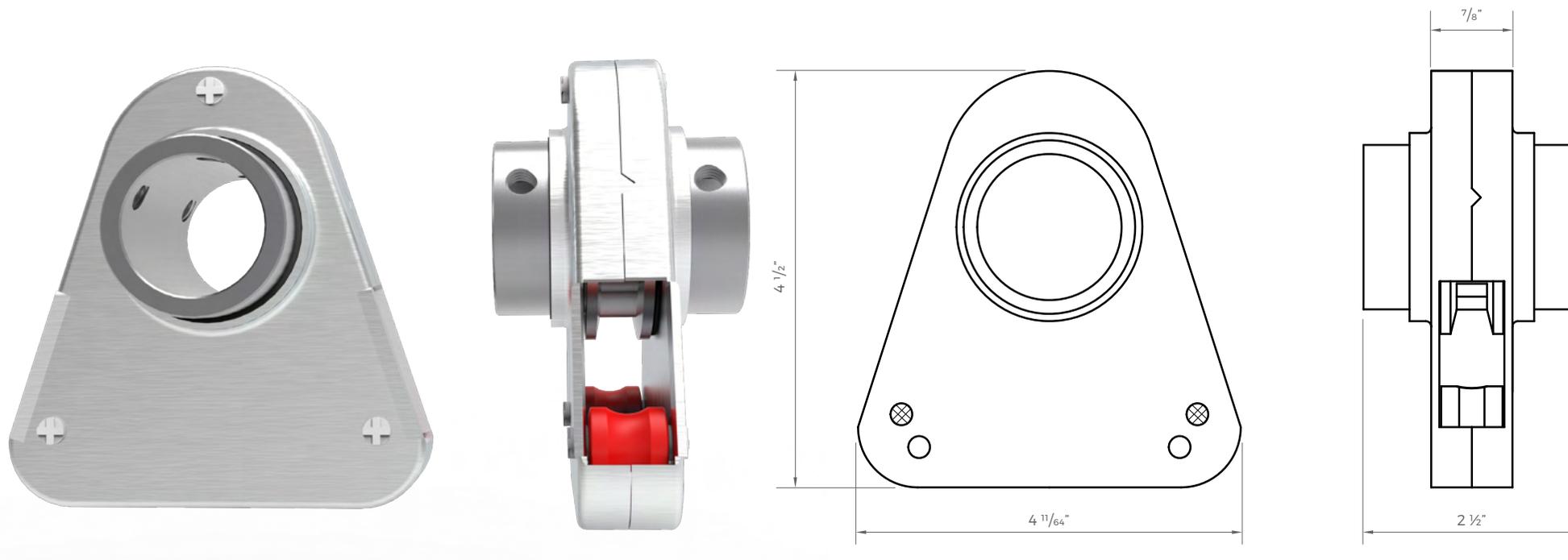
The rack travel per turn of the drive shaft is 10 teeth which equates to 5" travel on the rack.



*All dimensions are approximate

STANDARD PRESSED PINION

The standard pinion is designed to fit onto a $1\frac{3}{8}$ " shaft.



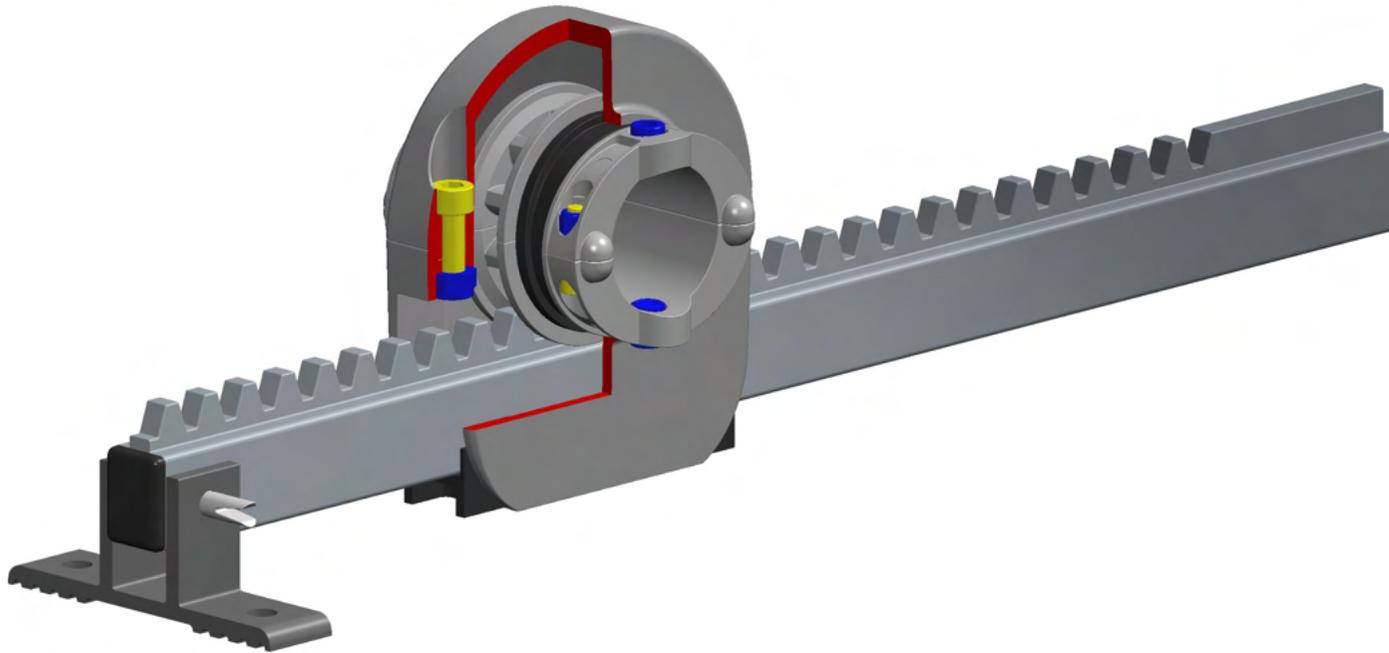
This pinion unit is often selected as the standard component for new installations. The enclosed design of the pinion housing keeps the mechanism free from debris so is ideal for horticultural use.

The aluminium pinion housing and zinc alloy pinion wheel are corrosion resistant to ensure continuous operation for extended periods even in the harshest environment. Four fixing holes in the pinion along with use of knurled cup point grub screws give increased grip on the drive tube.

The pinion housing is fitted with nylon filled polymer bearing inserts and rack rollers to ensure smooth running and long life.

*All dimensions are approximate

EZ-FIT PINION



The pinions and housing are designed to be clamped and bolted onto the drive shaft while it remains in place. When replacing a single pinion in a long run, the ability to replace one without removing the entire system means the labor time is greatly reduced - in some cases, a task that could usually take a day can be done in just an hour.

To complement the EZ fit pinion, a two piece EZ fit bearer is also available in the same sizes.

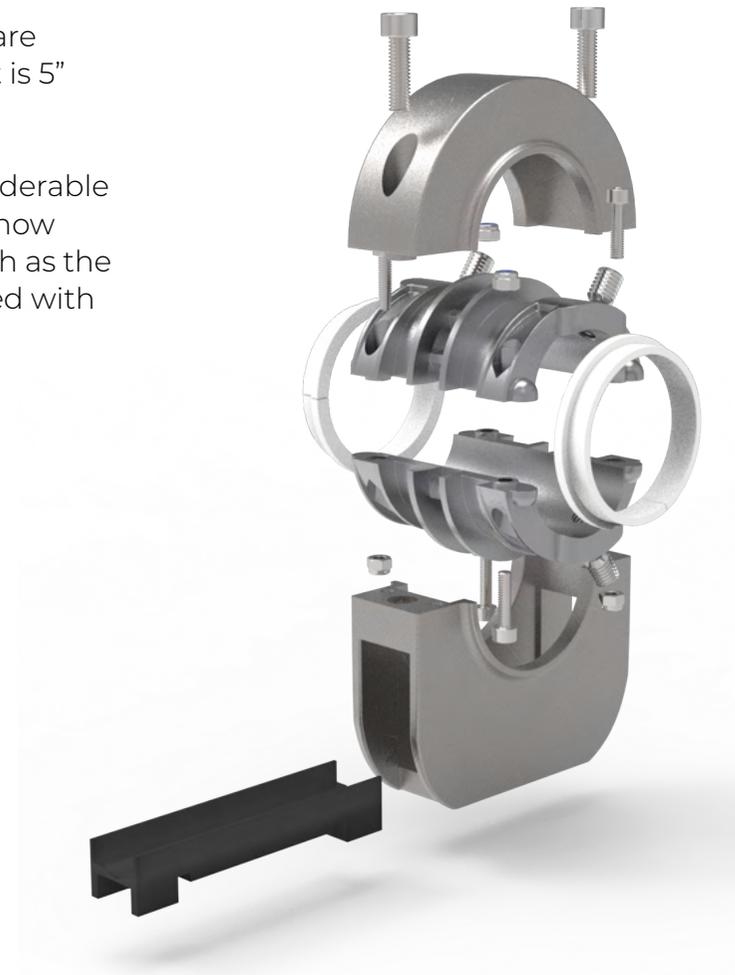
- ☑ FITS 1³/₈" AND 1⁵/₈" SHAFT SIZES
- ☑ BACKWARD COMPATIBLE WITH EXISTING RACKS
- ☑ FOUR GRUB SCREWS FOR INCREASED GRIP
- ☑ NYLON BEARINGS & SLIDERS FOR REDUCED FRICTION

*All dimensions are approximate

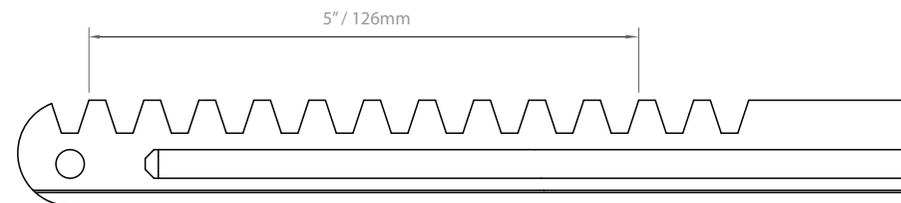
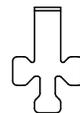
EZ-FIT PINION - RETRO FITS

EZ-fit pinions are available to fit $1\frac{3}{8}$ " and $1\frac{5}{8}$ " shaft sizes. To ensure your racks are compatible, just measure the distance covered by 10 teeth on the rack and if it is 5" then the EZ fit pinions should be suitable.

The Roper IBC "cross rack" & pinion was a popular choice and there are a considerable number still in the field but the supplied pinion was prone to failure. Growers now have an easy fix for this problem as our EZ-fit pinions have the same tooth pitch as the IBC rack and so, with the use of a special slider block, EZ-fit pinions can be used with servicable IBC racks.

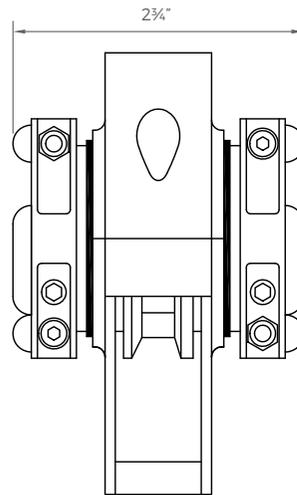
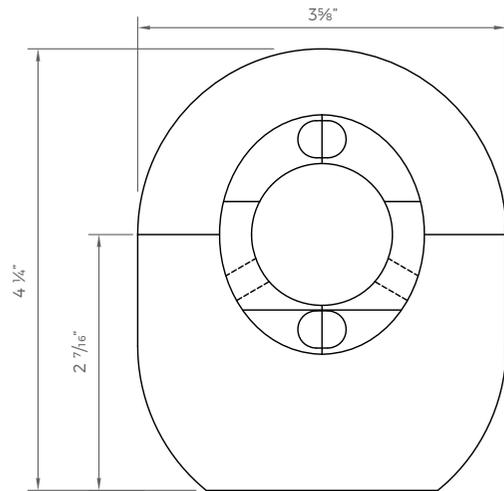


- ✓ LABOUR SAVING SYSTEM FOR FAST REPAIRS
- ✓ RETRO FITS IN PLACE OF IBC PINIONS
- ✓ FITS $1\frac{3}{8}$ " AND $1\frac{5}{8}$ " SHAFT SIZES



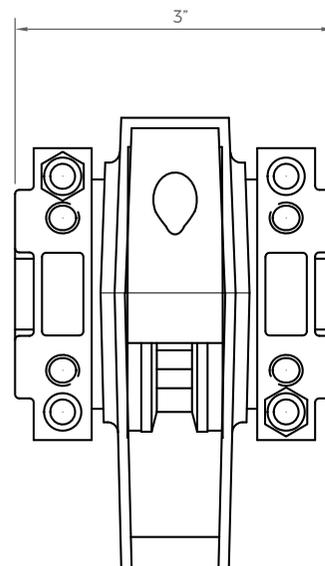
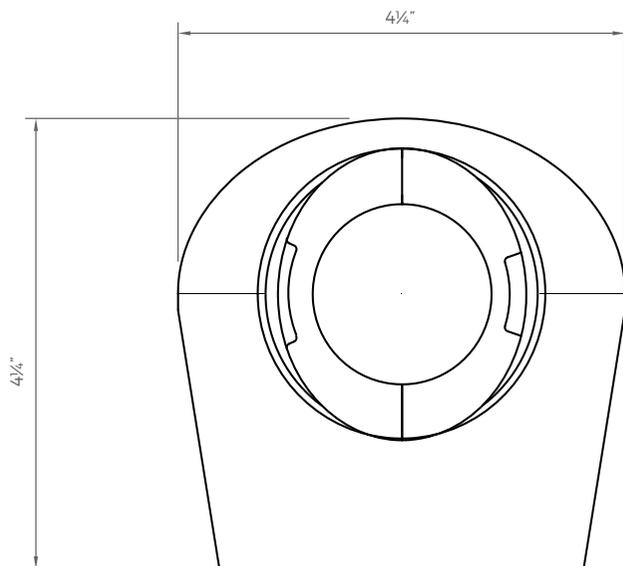
*All dimensions are approximate

EZ-FIT PINIONS



1 3/8" EZ-FIT PINION

Designed to fit onto a 1 3/8" shaft.



1 5/8" EZ-FIT PINION

Designed to fit onto a 1 5/8" shaft.

*All dimensions are approximate

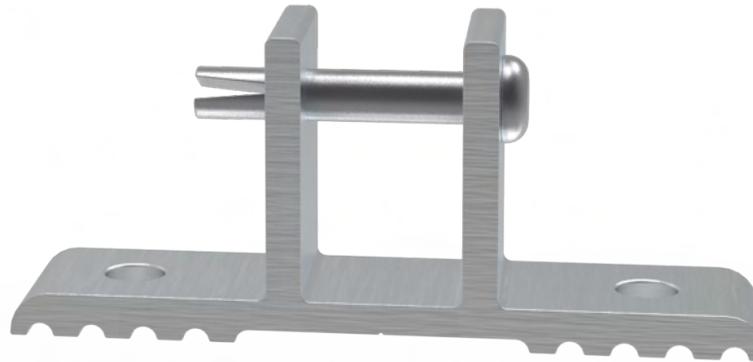
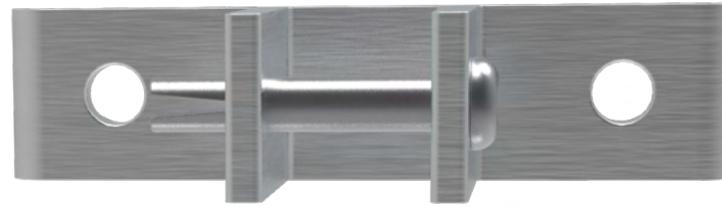
SASH BRACKET / VENT PIVOT

STANDARD SASH BRACKET / VENT PIVOT

This is the default bracket supplied with all rack & pinion orders.

An aluminum split pin or stainless steel bolt with a nyloc nut is used to securely attach the rack to the vent pivot.

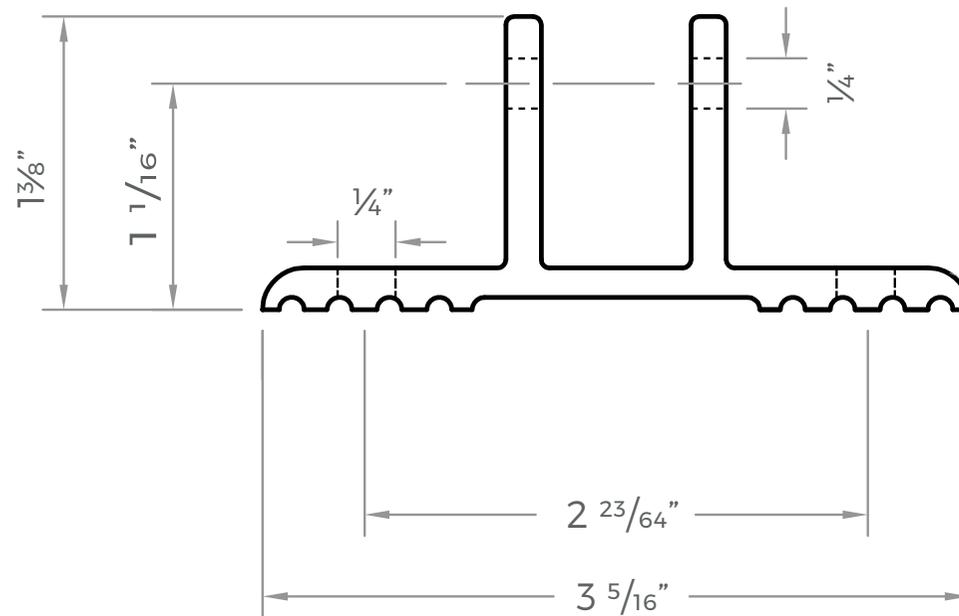
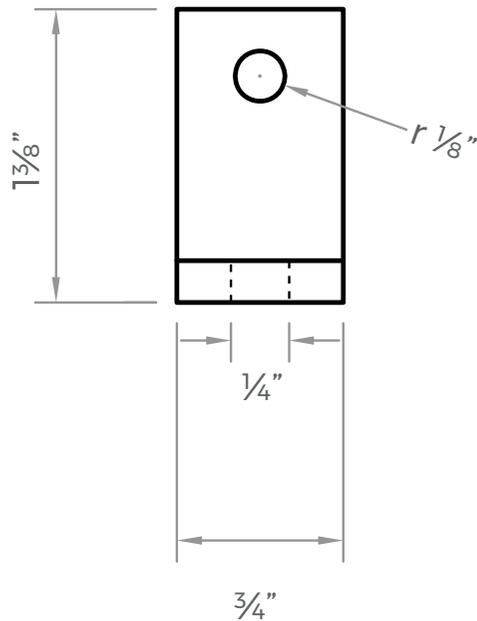
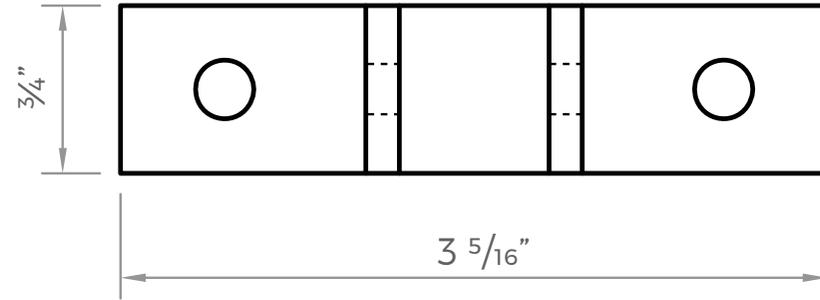
Material: 6063 T6 Aluminum



*All dimensions are approximate

SASH BRACKET / VENT PIVOT

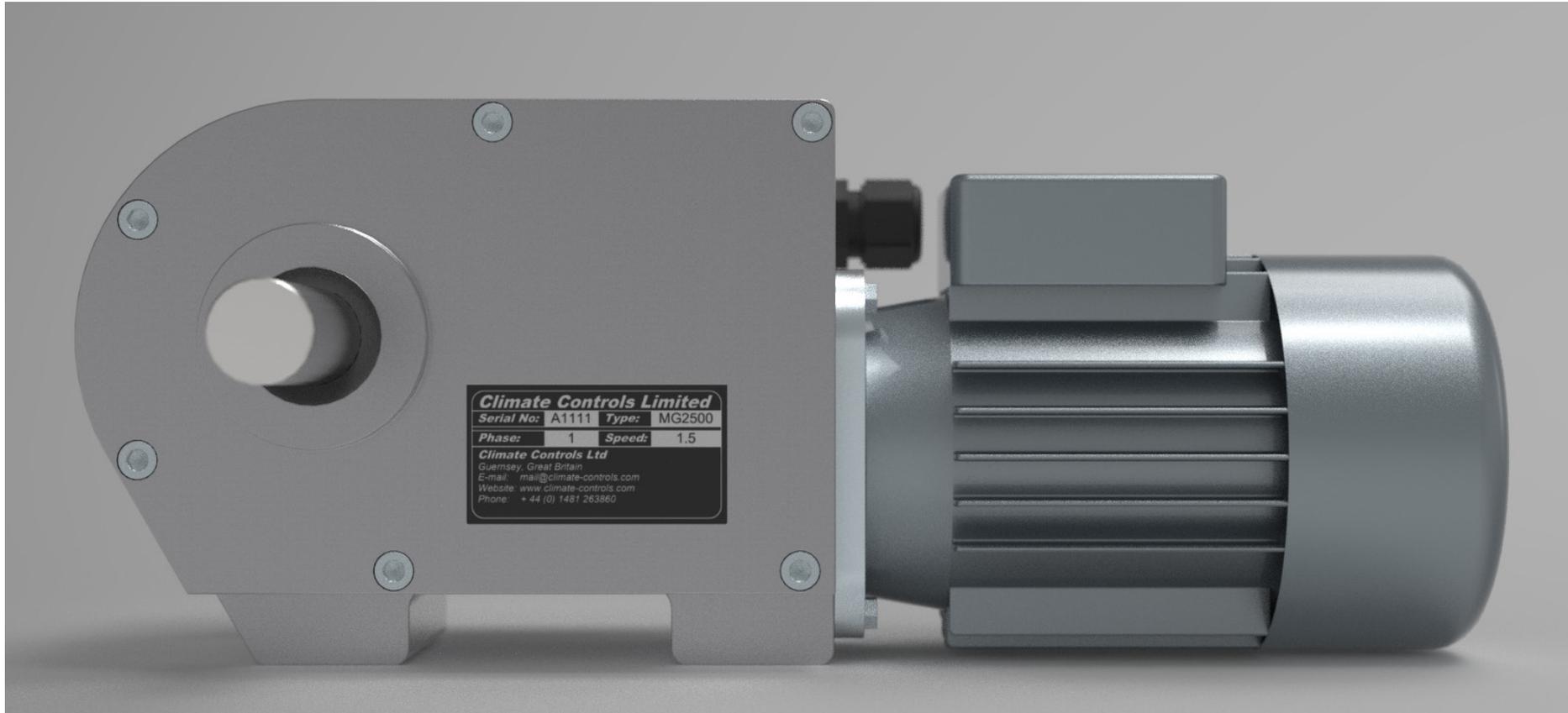
SASH BRACKET DIMENSIONS



*All dimensions are approximate



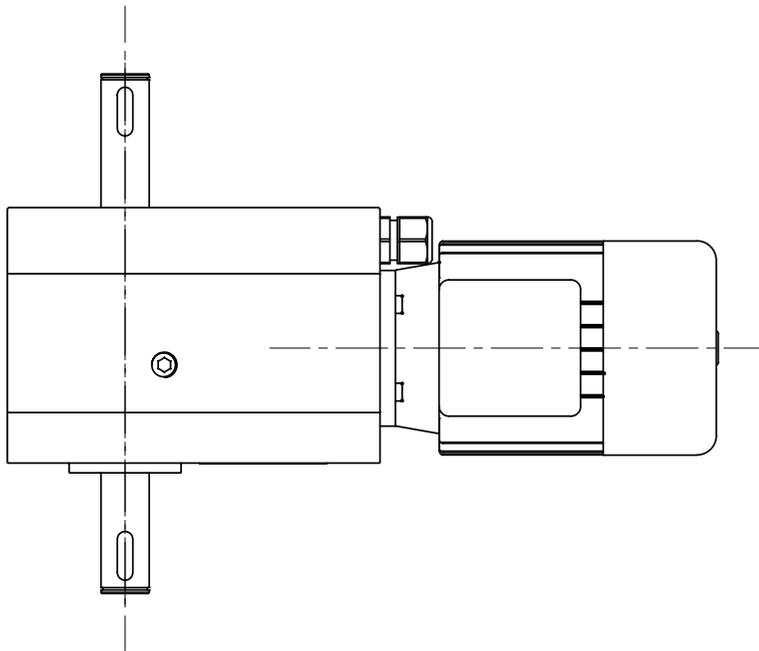
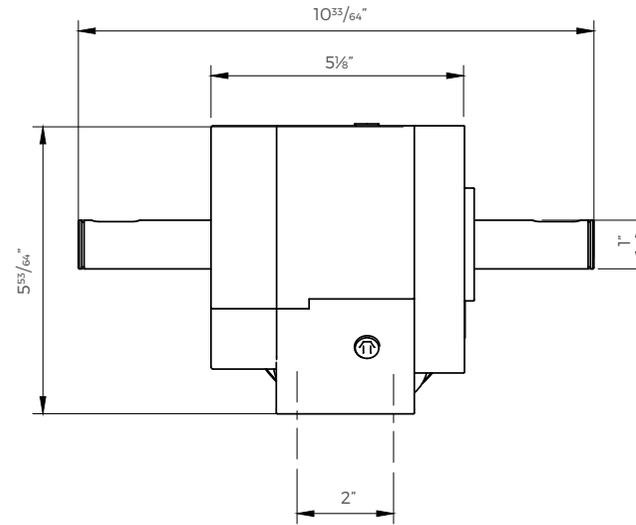
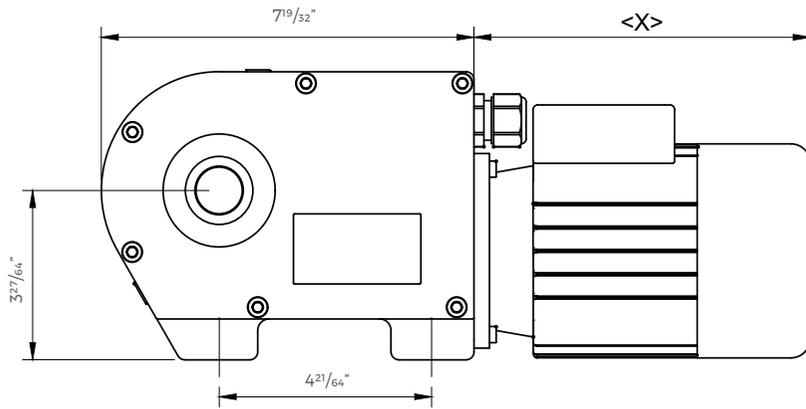
MG250



SPECIFICATIONS - 115V single phase or 208V three phase

	60Hz	60Hz	60Hz	60Hz
Speed	1.5 r.p.m.	2.4 r.p.m.	3.7 r.p.m.	4.8 r.p.m.
Power	0.5hp	0.25hp	0.25hp	0.5hp
Torque	200 Nm 2200 in.lb	250 Nm 2200 in.lb	180 Nm 1700 in.lb	180 Nm 1300 in.lb
Weight	35 lbs	26 lbs	26 lbs	35lbs
Motor	IEC 63 frame, B14 flange, 60Hz			

MG250



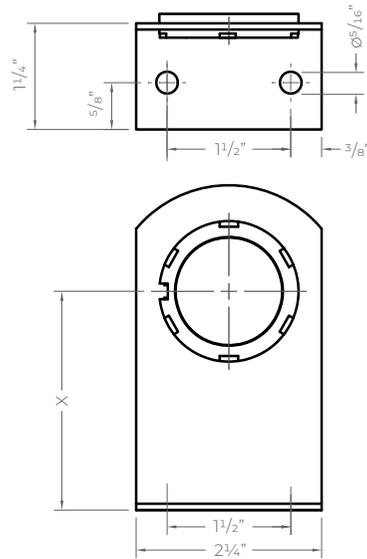
*All dimensions are approximate

SHAFT HANGER

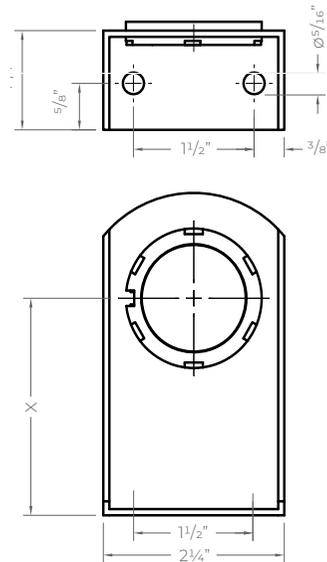
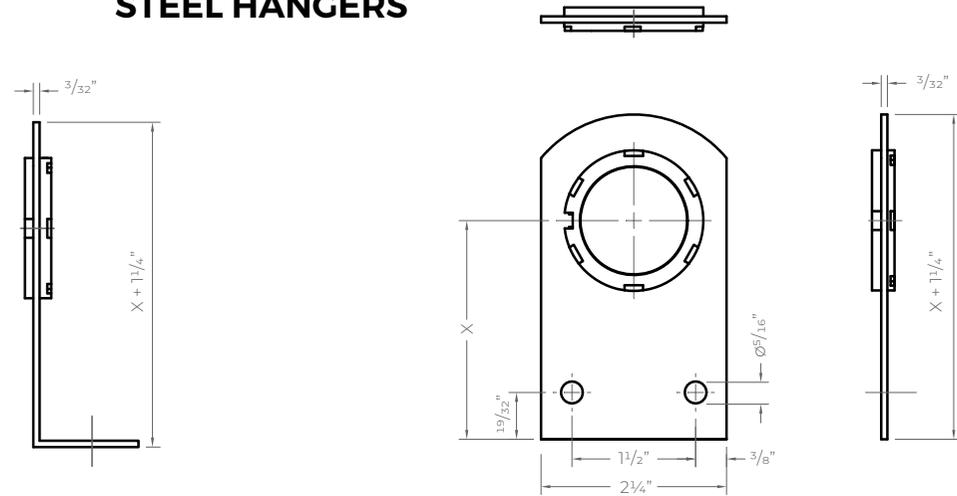
1³/₈" SHAFT HANGERS

Designed to fit onto a 1³/₈" shaft, these hangers are available in flat or angled and manufactured from either Z235 galvanized steel strip or aluminum alloy.

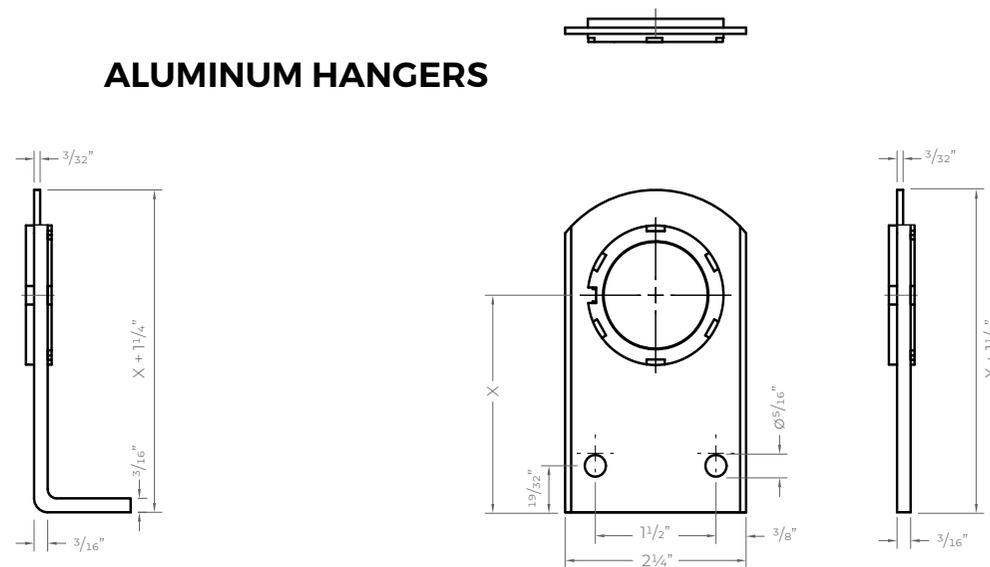
The dimension shown as X on the drawings is all we need to manufacture hangers.



STEEL HANGERS



ALUMINUM HANGERS



*All dimensions are approximate

EZ-FIT SHAFT HANGER

EZ-FIT SHAFT HANGERS

Available to fit a $1\frac{3}{8}$ " or $1\frac{5}{8}$ " shaft, EZ-Fit Shaft Hangers deliver the same labor saving benefits as our EZ-Fit pinions.

The two piece hinged design enables quick and simple repair and replacement of damaged hangers.



SHAFT HANGER GALLERY

SHAFT HANGERS

All hangers shown below are to fit 1³/₈" shaft.

Steel - angled



Steel - flat



Aluminum - angled



Aluminum - flat



EZ-Fit

