

## Awning and Tackle Pulleys ... For Small Lifting Or Pulling Projects.

- Zinc die-cast body and solid brass sheave.
- Ideal for awnings, blinds, screens, boats, tarps or other projects where light-duty pulleys are needed.
- Chrome-nickel or brass finish for protection against rust.
- Recommended for indoor or outdoor use.

### SPECIFICATIONS

SIZE (SHEAVE DIA.)	FINISH	MAX. ROPE SIZE	WORKING LOAD
<b>3200 ROPE CLEATS</b>			
2-1/2"	Chrome	-	35 lbs.
4-1/2"	Chrome	-	55 lbs.
6"	Chrome	-	30 lbs.
2-1/2"	B. Brass	-	35 lbs.
<b>3201 SWIVEL-EYE SINGLE PULLEYS</b>			
1/2"	Chrome	3/16"	9 lbs.
3/4"	Chrome	3/16"	25 lbs.
1"	Chrome	1/4"	40 lbs.
<b>3203 FIXED-EYE SINGLE PULLEYS</b>			
1/2"	Chrome	3/16"	15 lbs.
3/4"	Chrome	3/16"	25 lbs.
1"	Chrome	1/4"	40 lbs.
<b>3204 FIXED-EYE DOUBLE PULLEYS</b>			
3/4"	Chrome	3/16"	25 lbs.
1"	Chrome	1/4"	30 lbs.

## Weatherproof Pulleys ... For Any Lifting or Pulling Project.

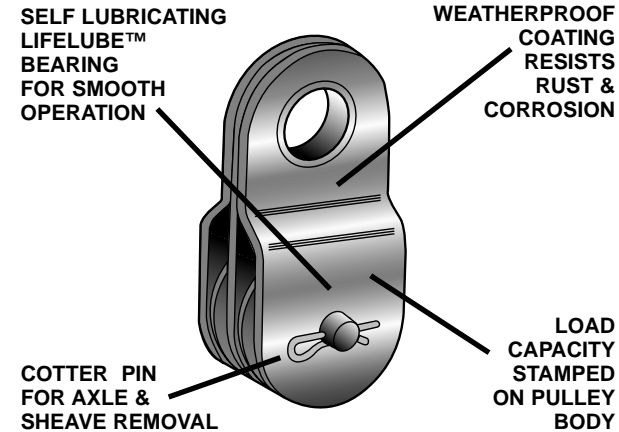
- Steel body and axle construction with die-cast zinc sheave.
- LifeLube™ alloy bearings for extra long life and smooth operation.
- Removable axle and sheave for easy rigging.
- Weatherproof finish for protection against rust and corrosion.
- Recommended for indoor or outdoor use.

### SPECIFICATIONS

SIZE (SHEAVE DIA.)	MAX. ROPE SIZE	WORKING LOAD
<b>3211 SWIVEL-EYE SINGLE PULLEYS</b>		
1-1/2"	3/8"	420 lbs.
2"	3/8"	480 lbs.
2-1/2"	3/8"	550 lbs.
3"	1/2"	650 lbs.
<b>3213 FIXED-EYE SINGLE PULLEYS</b>		
1-1/2"	3/8"	420 lbs.
2"	3/8"	480 lbs.
2-1/2"	3/8"	550 lbs.
3"	1/2"	650 lbs.
<b>3214 FIXED-EYE DOUBLE PULLEY</b>		
1-1/2"	3/8"	400 lbs.
<b>3215 SWIVEL-HOOK SINGLE PULLEYS</b>		
1-1/2"	3/8"	420 lbs.
2"	3/8"	480 lbs.
2-1/2"	3/8"	550 lbs.
3"	1/2"	650 lbs.
<b>3217 SCISSOR-HOOK SINGLE PULLEYS</b>		
1-1/2"	3/8"	420 lbs.
2"	3/8"	480 lbs.
2-1/2"	3/8"	550 lbs.
3"	1/2"	650 lbs.
<b>3219 WALL OR CEILING SINGLE PULLEYS</b>		
1-1/2"	3/8"	420 lbs.
2"	3/8"	480 lbs.
<b>3221 JOIST MOUNT SINGLE PULLEY</b>		
2"	3/8"	100 lbs.
<b>3223 LATCHING SWIVEL-HOOK SINGLE PULLEY</b>		
2"	3/8"	480 lbs.
<b>3225 SINGLE PULLEY BLOCK &amp; TACKLE SET</b>		
2"	3/8"	480 lbs.

CAUTION: Safe working load is based on proper installation and support. Do not exceed capacity or load limit of rope, pulley, or attachment, whichever is less. Do not use these products for overhead lifting of a load, for support of human weight or for athletic or playground equipment. Products should be inspected frequently and replaced if signs of stress or wear appear. DO NOT USE WITH WIRE ROPE OR CABLE.

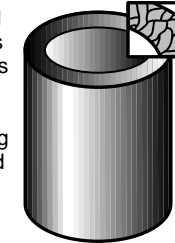
## Why You Should Use National's Weatherproof Pulleys



LOAD CAPACITY STAMPED ON PULLEY BODY

### NATIONAL'S SECRET TO QUALITY PULLEYS IS LIFELUBE™ BEARINGS

LifeLube™ alloy bearings appear solid but are actually porous with thousands of capillary tubes which act as reservoirs for high-grade lubricating oil. Heat and pressure differences release this oil to the bearing surface as needed producing a protective film between the shaft and bearing. This prevents metal-to-metal contact for extra long life and smooth operation.



**National**

NATIONAL MANUFACTURING CO.  
STERLING, IL 61081 • 800/346-9445

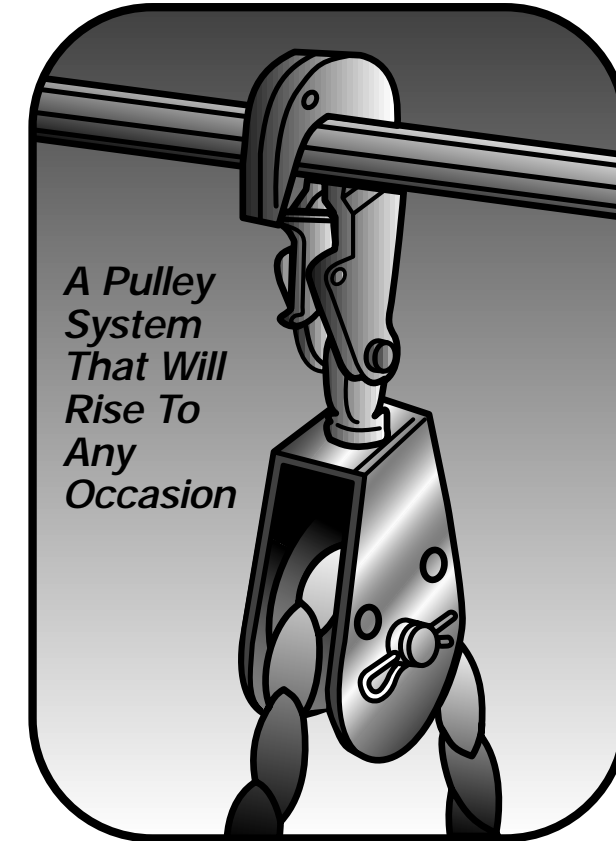
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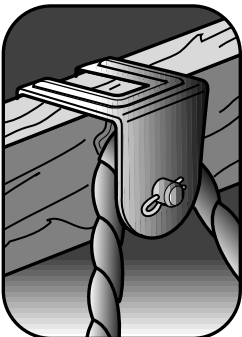
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# WEATHERPROOF PULLEYS

PRODUCTS AND APPLICATIONS

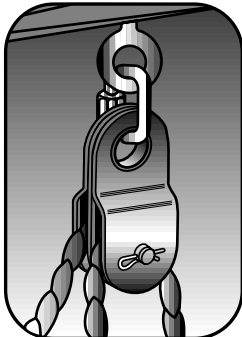


**National**



### 3221 JOIST-MOUNT SINGLE PULLEY

- Hooks over 1-1/2" dimensional lumber joists and secures with 8d nails or # 5 screws.
- 2" Pulley sheave diameter with 100 pound safe working load limit.

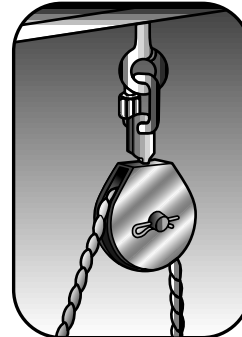


### 3213 FIXED-EYE SINGLE PULLEY (Not shown)

- For easy rigging and secure connection.
- Available in 1-1/2", 2", 2-1/2" & 3" Pulley sheave diameters.

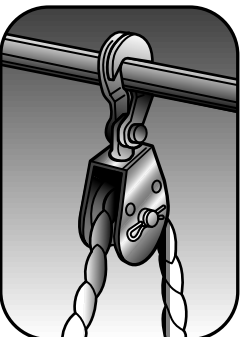
### 3214 FIXED-EYE DOUBLE PULLEY

- Rig as a block and tackle to reduce line pull.
- 1-1/2" Pulley sheave diameter and 400 pound maximum load capacity.



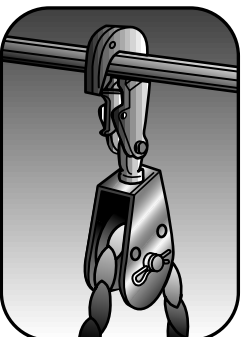
### 3211 SWIVEL-EYE SINGLE PULLEY

- For simple easy rigging.
- Swivel eye eliminates tangle.
- Available in 1-1/2", 2", 2-1/2" & 3" Pulley sheave diameters.



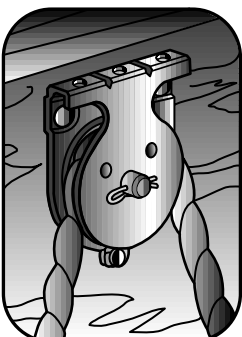
### 3217 SCISSOR-HOOK SINGLE PULLEY

- For easy rigging and secure connection.
- Swivel eye eliminates tangle.
- Available in 1-1/2", 2", 2-1/2" or 3" Pulley sheave diameters.



### 3223 LATCHING SWIVEL-HOOK SINGLE PULLEY

- Safety latch hook for secure installation.
- Swivel eye eliminates tangle.
- 2" Pulley sheave with 480 pound load capacity.

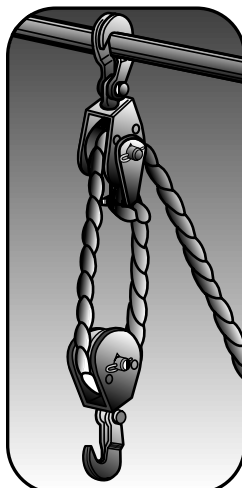


### 3219 WALL OR CEILING SINGLE PULLEY

- Screw mounted to wall or ceiling for permanent installation.
- Available in 1-1/2" or 2" Pulley sheave diameters.

### 3225 SINGLE PULLEY BLOCK AND TACKLE SET

- Lifts twice as much weight as force exerted on line.
- Swivel eye eliminates tangle.
- 2" Pulley sheave with 480 pound load capacity.
- Bracket allows cord to be tied off.



## Awning and Tackle Pulleys

### 3200 ROPE CLEATS

- Zinc die-cast.
- No rust chrome-nickel finish.
- Available sizes are 2-1/2", 4-1/2" and 6".
- 2-1/2" bright brass also available.
- Ideal for fastening rope for boats, awnings, etc.



### 3201 SWIVEL-EYE SINGLE PULLEYS

- Zinc die-cast body with solid brass sheave.
- No rust chrome-nickel finish.
- Swivel eye eliminates tangle.
- Available with 1/2", 3/4" or 1" sheave diameters.
- Can be rigged as block and tackle to reduce line pull.



### 3203 FIXED-EYE SINGLE PULLEYS

- Zinc die-cast body with solid brass sheave.
- No rust chrome-nickel finish with copper undercoat.
- Fixed eye eliminates tangle.
- Available with 1/2", 3/4" or 1" sheave diameters.
- Can be rigged as block and tackle to reduce line pull.



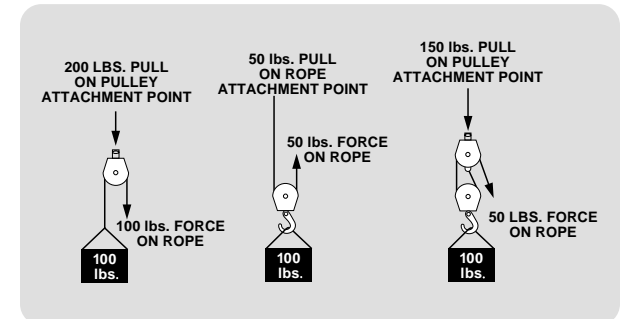
### 3204 FIXED-EYE DOUBLE PULLEYS

- Zinc die-cast body with solid brass sheave.
- No rust chrome-nickel finish with copper undercoat.
- Fixed eye eliminates tangle.
- Available with 3/4" or 1" sheave diameters.
- Can be rigged as block and tackle to reduce line pull.



### PULLEY WORK LOADS

Pulleys are used as part of a system intended to accomplish a task. Loads imposed by this system on attachments must be within safe working load range of that attachment. The following diagrams illustrate loads imposed on the pulley, the attachment, and the rope for a variety of applications.



### PULLEY ANGLE FACTORS

Force on pulley attachment point varies with the angle between the load and pulley rope.

