

# ACORN™ IN-PLANT SURVEY

A simple, safe & ergonomic operating practice for any caster application:  
Each caster on the equipment should be rated at an amount equal to the total load.

## ACORN PRODUCT SURVEY

Equipment Name / Type: \_\_\_\_\_

\_\_\_\_\_

Measurements: \_\_\_\_\_

\_\_\_\_\_

### Maximum Capacity:

Contents + Container Weight = \_\_\_\_\_ lbs

Is Overload Possible?    \_\_\_ Yes    \_\_\_ No

Shock Loads?            \_\_\_ Yes    \_\_\_ No

Heavier Loads in Future? \_\_\_ Yes    \_\_\_ No

If Yes, \_\_\_\_\_ lbs

Floor Material: \_\_\_\_\_

\_\_\_\_\_

Floor Condition: \_\_\_\_\_

\_\_\_\_\_

Operating Environmental Factors: (Noise, Speed, Abuse, Extreme  
Temperature, Oils, Constant Moisture, Other \_\_\_\_\_

\_\_\_\_\_

Movement:    \_\_\_ Manual Operation    \_\_\_ Power/Towing Operation

Power:            \_\_\_ High Speed            \_\_\_ Side Thrust

## CASTER MOUNTING PATTERN

Conventional: \_\_\_\_\_

Diamond: \_\_\_\_\_

4-Wheel: \_\_\_\_\_

6-Wheel: \_\_\_\_\_

Other: \_\_\_\_\_

## ACCESSORIES / OPTIONS

Swivel Locks (SL): \_\_\_\_\_

Wheel Brakes (WB): \_\_\_\_\_

Total Lock Brakes (TL): \_\_\_\_\_

Floor Locks (FL): \_\_\_\_\_

Other: \_\_\_\_\_

## TOP PLATE / CASTER CONSTRUCTION

Present Top Plate Size:    \_\_\_\_\_ x \_\_\_\_\_ in / mm

Present Bolt Hole Pattern: \_\_\_\_\_ x \_\_\_\_\_ in / mm

Slotted To: \_\_\_\_\_ x \_\_\_\_\_ in / mm

Present Overall Height:    \_\_\_\_\_ in / mm

Present Swivel Radius:    \_\_\_\_\_ in / mm

Rig Construction:    \_\_\_ Stamped            \_\_\_ Cold Forged

                                 \_\_\_ Hot Forged            \_\_\_ Kingpinless

                                 \_\_\_ Stainless Steel        \_\_\_ Welded Legs

Notes: \_\_\_\_\_

\_\_\_\_\_

## WHEEL OPTIONS

Wheel Diameter: \_\_\_\_\_

Tread Width: \_\_\_\_\_

Bearing Type: \_\_\_\_\_

Other: \_\_\_\_\_

Acorn Recommendations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# **BENEFITS OF AN ACORN™ IN-PLANT CASTER & WHEEL SURVEY**

## **SIMPLE IDENTIFICATION**

The caster and wheel survey recommends a specific ordering number for each piece of rolling equipment in the facility.

## **LABELING**

The casters can be labeled with the replacement caster number and / or your stock number. There is no longer any need to take future caster measurements or look up old invoices to determine where they were last purchased or remember model numbers.

## **REDUCTION IN INVENTORY**

In many cases, we are able to consolidate the many sizes into fewer models and thus reduce inventory being carried for the same style cart or equipment.

## **IMPROVED PERFORMANCE**

Many times, we find that the castered equipment is “under castered” (i.e. not heavy enough for the job.) The caster may not have enough load capacity for what the job requires. It may need kingpinless construction or the wheel may be the wrong type and damaging to the floors. We have even found employees complaining about difficulty in pulling or pushing equipment, which is easily resolved with Nylacron™ wheels with the right size precision ball bearings.

## **EASE OF BUYING**

The survey shows the customer that he can buy all his caster requirements, for all rolling equipment, from one source with fewer orders and thus lowering ordering costs. Acorn™ keeps a complete record of all products sold to each customer in its database for quick and easy reference.

## **LESS DOWN-TIME**

After the plant survey is completed and the models are selected for in-plant requirements, Acorn™ will stock all of these casters for SAME DAY SHIPMENT.

## **THE IN-PLANT SURVEY COSTS NOTHING, OFFERS EASE OF ORDERING AND SAVES YOU MONEY!**

After the plant survey is completed, Acorn™ will provide a summary with all  
caster and wheel requirements and costs.

**Acorn Industrial Products Co**

Phone: 800.523.5474    Web: [acornindprod.com](http://acornindprod.com)    E-mail: [acorn@acornindprod.com](mailto:acorn@acornindprod.com)

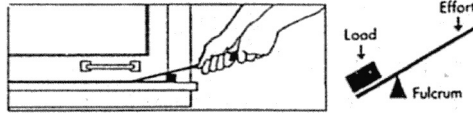
# Material Handling Basics

## MECHANICAL ADVANTAGES MAKE THE TASK EASIER!

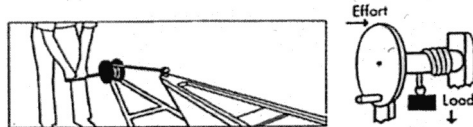
To Avoid Injury,  
Always Consider  
Ergonomics  
and Safety.

Keep the Following  
to a Minimum:

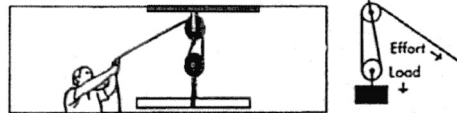
Pushing  
Pulling  
Lifting  
Bending  
Stretching  
Contorting



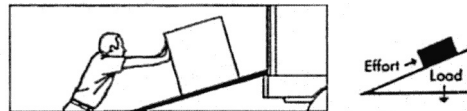
The lever is one of the earliest and simplest machines. Its advantage lies in the short distance between the fulcrum (pivotal point) and load, and in the long distance between the fulcrum and the point where effort is applied.



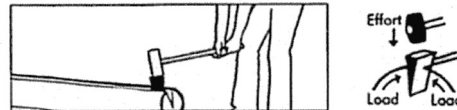
The wheel and axle has a rope attached to the axle to lift the load. The crank handle is the point where effort is applied. The effort is smaller than the load because it is at a greater distance from the axle which is the fulcrum.



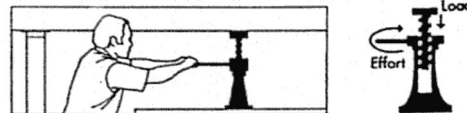
The pulley consists of a wheel with a grooved rim over which a rope is passed. It is used to change the direction of the effort applied to the rope. A block and tackle uses two or more pulleys to reduce the amount of effort needed to lift a load.



The inclined plane makes it easier to slide or skid a load upward than to lift it directly. The longer the slope, the smaller the effort required. The amount of work, however, is no less than if the load were lifted directly upward.



The wedge, when struck with a mallet or sledge, exerts a large force on its sides. A gently tapering, or thin, wedge is more effective than a thick one. The mechanical advantage of the wedge is of great importance.



The screw is a spiral inclined plane. The jackscrew is a combination of the lever and the screw. It can lift a heavy load with relatively small effort. Therefore, it has a very high mechanical advantage for practical purposes.

Lever

Wheel & Axle

Pulley

Inclined Plane

Wedge

Screw

# ERGONOMICS & SAFETY

## THE RIGHT ERGONOMIC CASTERS AND WHEELS

Every product that moves should have the right ergonomic casters and wheels to ensure workplace safety and optimum value.

## PUSHING AND PULLING

Pushing and pulling, as well as lifting, bending, stretching and contorting, can cause back injuries with resulting lost time and production inefficiencies.

## ACORN™ IS COMMITTED TO ERGONOMICS AND SAFETY

Acorn is committed to ergonomics and safety in all caster and wheel applications. By this we mean ease of swiveling, better rollability, along with proper swivel lock or swivel lock wheel brake combination. **We back this up with over 50 years of successful field application experience.**

## ACORN™ OFFERS THE FOLLOWING BENEFITS

- 1. Improved Quality**
- 2. Better Performance**
- 3. Lowest Cost-In-Use**
- 4. Less Down-Time**
- 5. Greater Dependability and Reliability**

There are a vast number of improper application of casters and wheels in the marketplace due to mail order purchasing and inexperienced field caster and wheel application knowledge. It is our aim, with this complete engineering catalog, to assure the user the proper specifications in any caster or wheel application.

## PLEASE CALL FOR ASSISTANCE OR SPECIFICATIONS

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# Fractions - Decimals - Millimeters

Inches (Fraction)	Inches (Decimal)	Milli- meters	Inches (Fraction)	Inches (Decimal)	Milli- meters	Inches (Fraction)	Inches (Decimal)	Milli- meters
1/64	0.02	0.40	25/64	0.39	9.91	49/64	0.77	19.43
1/32	0.03	0.79	13/32	0.41	10.31	25/32	0.78	19.83
3/64	0.05	1.19	27/64	0.42	10.71	51/64	0.80	20.23
1/16	0.06	1.59	7/16	0.44	11.10	13/16	0.81	20.62
5/64	0.08	1.98	29/64	0.45	11.50	53/64	0.83	21.02
3/32	0.09	2.38	15/32	0.47	11.90	27/32	0.84	21.41
7/64	0.11	2.78	31/64	0.48	12.29	55/64	0.86	21.81
<b>1/8</b>	<b>0.13</b>	<b>3.17</b>	<b>1/2</b>	<b>0.50</b>	<b>12.69</b>	<b>7/8</b>	<b>0.88</b>	<b>22.21</b>
9/64	0.14	3.57	33/64	0.52	13.09	57/64	0.89	22.60
5/32	0.16	3.97	17/32	0.53	13.48	29/32	0.91	23.00
11/64	0.17	4.36	35/64	0.55	13.88	59/64	0.92	23.40
3/16	0.19	4.76	9/16	0.56	14.28	15/16	0.94	23.79
13/64	0.20	5.16	37/64	0.58	14.67	61/64	0.95	24.19
7/32	0.22	5.55	19/32	0.59	15.07	31/32	0.97	24.59
15/64	0.23	5.95	39/64	0.61	15.47	63/64	0.98	24.98
<b>1/4</b>	<b>0.25</b>	<b>6.35</b>	<b>5/8</b>	<b>0.63</b>	<b>15.86</b>	<b>1</b>	<b>1.00</b>	<b>25.38</b>
17/64	0.27	6.74	41/64	0.64	16.26	2	2.00	50.76
9/32	0.28	7.14	21/32	0.66	16.66	3	3.00	76.14
19/64	0.30	7.53	43/64	0.67	17.05	4	4.00	101.52
5/16	0.31	7.93	11/16	0.69	17.45	5	5.00	126.90
21/64	0.33	8.33	45/64	0.70	17.85	6	6.00	152.28
11/32	0.34	8.72	23/32	0.72	18.24	7	7.00	177.66
23/64	0.36	9.12	47/64	0.73	18.64	8	8.00	203.05
<b>3/8</b>	<b>0.38</b>	<b>9.52</b>	<b>3/4</b>	<b>0.75</b>	<b>19.04</b>	<b>12</b>	<b>12.00</b>	<b>304.57</b>

### Convert Inches to Millimeters:

Multiply Inches by 25.4

(i.e. **2-1/2 in** = 25.4 x 2.5 = **63.5 mm**)

### Convert Pounds to Kilograms:

Multiply Pounds by 2.2046

(i.e. **20 lbs** = 2.2046 x 20 = **44.092 kg**)

### Convert Millimeters to Inches:

Divide Millimeters by 25.4

(i.e. **63.5 mm** ÷ 25.4 = **2-1/2 in**)

### Convert Kilograms to Pounds:

Divide Kilograms by 2.2046

(i.e. **44.092 kg** ÷ 2.2046 = **20 lbs**)