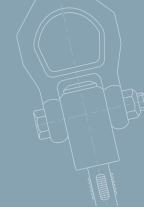


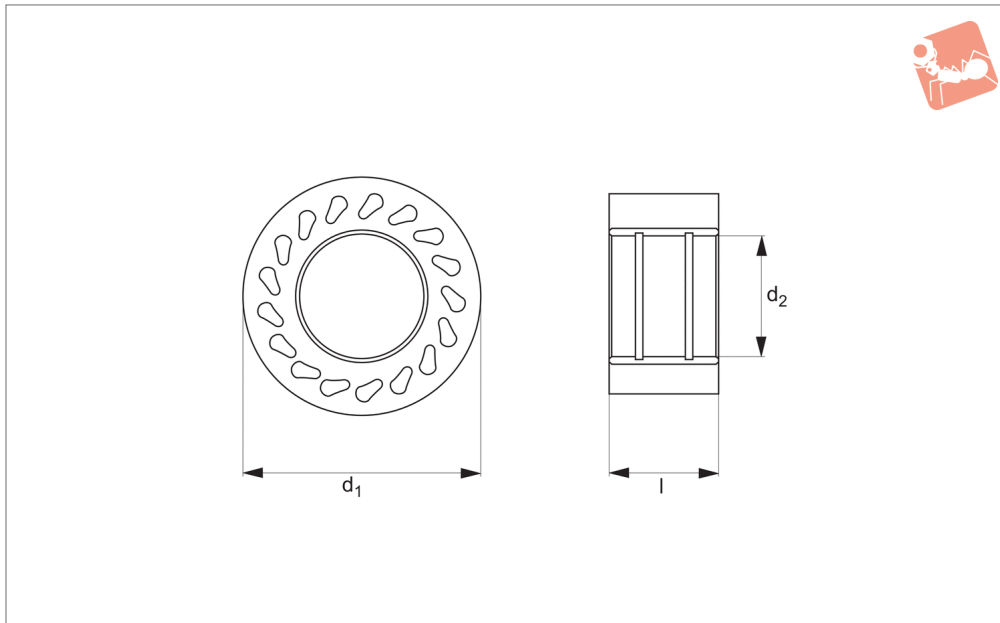


## Durasoft Roller

roller only



## Rollers & Bumpers



60640

ROLLERS & BUMPERS

### Material

Urethane bonded to a steel insert. Hardness from 35-95 durometer (Shore A).

### Technical Notes

Roller only - allows for custom mounting.

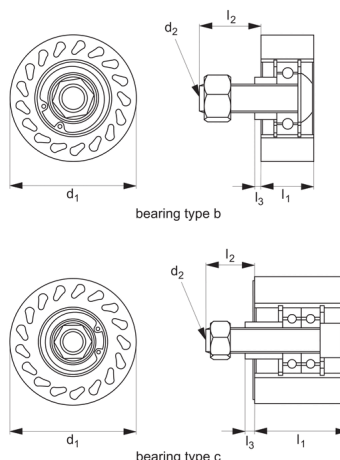
### Tips

Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-damaging contact.

| Order No.   | Durometer | d <sub>1</sub> | l     | d <sub>2</sub><br>min.   max. |
|-------------|-----------|----------------|-------|-------------------------------|
| 60640.W1003 | 35        | 63,5 (2,5")    | 23.37 | 28,58/28,65                   |
| 60640.W1006 | 60        | 63,5 (2,5")    | 23.37 | 28,58/28,65                   |
| 60640.W1008 | 80        | 63,5 (2,5")    | 23.37 | 28,58/28,65                   |
| 60640.W1009 | 95        | 63,5 (2,5")    | 23.37 | 28,58/28,68                   |
| 60640.W1013 | 35        | 63,5 (2,5")    | 49.28 | 31,80/31,90                   |
| 60640.W1016 | 60        | 63,5 (2,5")    | 49.28 | 31,80/31,90                   |
| 60640.W1018 | 80        | 63,5 (2,5")    | 49.28 | 31,80/31,90                   |
| 60640.W1019 | 95        | 63,5 (2,5")    | 49.28 | 31,80/31,90                   |
| 60640.W1023 | 35        | 101,6 (4")     | 23.37 | 31,80/31,90                   |
| 60640.W1026 | 60        | 101,6 (4")     | 23.37 | 31,80/31,90                   |
| 60640.W1028 | 80        | 101,6 (4")     | 23.37 | 31,80/31,90                   |
| 60640.W1029 | 95        | 101,6 (4")     | 23.37 | 31,80/31,90                   |
| 60640.W1033 | 35        | 101,6 (4")     | 49.28 | 31,80/31,90                   |
| 60640.W1036 | 60        | 101,6 (4")     | 49.28 | 31,80/31,90                   |
| 60640.W1038 | 80        | 101,6 (4")     | 49.28 | 31,80/31,90                   |
| 60640.W1039 | 95        | 101,6 (4")     | 49.28 | 31,80/31,90                   |



### 60644



#### Material

Urethane bonded to a steel insert. Hardness from 35-80 durometer (Shore A).

rings). For more details on bearings please see technical pages. Assembled with socket head cap screw, spacer and lock nut.

allow the roller to flex for firm but non-damaging contact.

#### Technical Notes

Bearings included (held in place with snap

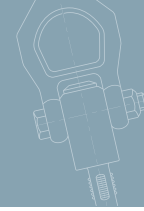
#### Tips

Durasoft rollers have „teardrop“ holes to

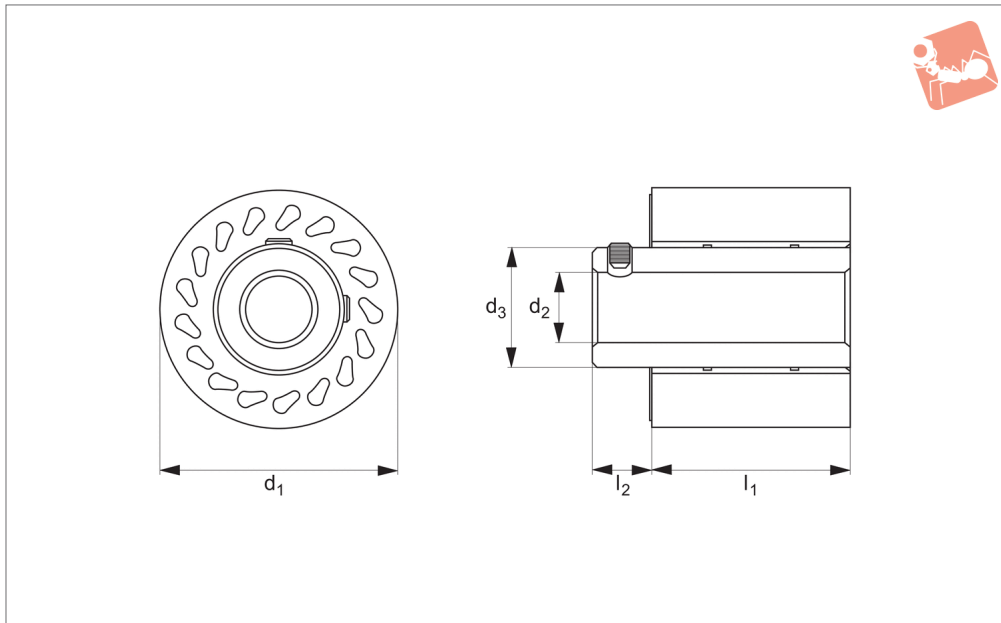
| Order No.   | Durometer | d <sub>1</sub> | l <sub>1</sub> | d <sub>2</sub> | l <sub>2</sub> | l <sub>3</sub> | Bearing type |
|-------------|-----------|----------------|----------------|----------------|----------------|----------------|--------------|
| 60644.W1003 | 35        | 62,5 (2,5“)    | 23.37          | 1/2-13         | 27.94          | 3.05           | B            |
| 60644.W1006 | 60        | 62,5 (2,5“)    | 23.37          | 1/2-13         | 27.94          | 3.05           | B            |
| 60644.W1008 | 80        | 62,5 (2,5“)    | 23.37          | 1/2-13         | 27.94          | 3.05           | B            |
| 60644.W1013 | 35        | 62,5 (2,5“)    | 49.28          | 1/2-13         | 35.81          | 6.35           | C            |
| 60644.W1016 | 60        | 62,5 (2,5“)    | 49.28          | 1/2-13         | 35.81          | 6.35           | C            |
| 60644.W1018 | 80        | 62,5 (2,5“)    | 49.28          | 1/2-13         | 35.81          | 6.35           | C            |
| 60644.W1023 | 35        | 101,6 (4“)     | 23.37          | 1/2-13         | 27.94          | 3.05           | B            |
| 60644.W1026 | 60        | 101,6 (4“)     | 23.37          | 1/2-13         | 27.94          | 3.05           | B            |
| 60644.W1028 | 80        | 101,6 (4“)     | 23.37          | 1/2-13         | 27.94          | 3.05           | B            |
| 60644.W1033 | 35        | 101,6 (4“)     | 49.28          | 1/2-13         | 35.81          | 6.35           | C            |
| 60644.W1036 | 60        | 101,6 (4“)     | 49.28          | 1/2-13         | 35.81          | 6.35           | C            |
| 60644.W1038 | 80        | 101,6 (4“)     | 49.28          | 1/2-13         | 35.81          | 6.35           | C            |



# Durasoft Roller shaft drive



## Rollers & Bumpers



**60646**

ROLLERS & BUMPERS

### Material

Urethane bonded to a steel insert. Hardness from 35-80 durometer (Shore A).

### Technical Notes

Designed to be mounted onto a shaft. A

hub extends past the roller and is supplied with two set screws at 90°.

damaging contact.

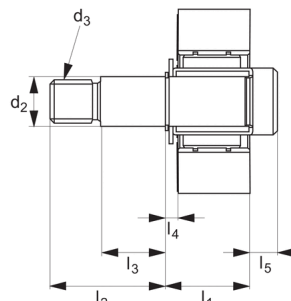
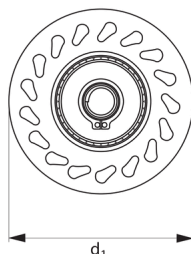
### Tips

Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-

| Order No.   | Durometer | d <sub>1</sub> | l <sub>1</sub> | d <sub>2</sub><br>min.   max. | l <sub>2</sub> | d <sub>3</sub> |
|-------------|-----------|----------------|----------------|-------------------------------|----------------|----------------|
| 60646.W1003 | 35        | 63,5 (2,5“)    | 23.37          | 12,73/12,83                   | 12.7           | 31.75          |
| 60646.W1006 | 60        | 63,5 (2,5“)    | 23.37          | 12,73/12,83                   | 12.7           | 31.75          |
| 60646.W1008 | 80        | 63,5 (2,5“)    | 23.37          | 12,73/12,83                   | 12.7           | 31.75          |
| 60646.W1009 | 95        | 63,5 (2,5“)    | 23.37          | 12,73/12,83                   | 12.7           | 31.75          |
| 60646.W1013 | 35        | 63,5 (2,5“)    | 23.37          | 15,90/16,03                   | 12.7           | 31.75          |
| 60646.W1016 | 60        | 63,5 (2,5“)    | 23.37          | 15,90/16,03                   | 12.7           | 31.75          |
| 60646.W1018 | 80        | 63,5 (2,5“)    | 23.37          | 15,90/16,03                   | 12.7           | 31.75          |
| 60646.W1019 | 95        | 63,5 (2,5“)    | 23.37          | 15,90/16,03                   | 12.7           | 31.75          |
| 60646.W1023 | 35        | 63,5 (2,5“)    | 23.27          | 19,08/19,20                   | 12.7           | 31.75          |
| 60646.W1026 | 60        | 63,5 (2,5“)    | 23.27          | 19,08/19,20                   | 12.7           | 31.75          |
| 60646.W1028 | 80        | 63,5 (2,5“)    | 23.27          | 19,08/19,20                   | 12.7           | 31.75          |
| 60646.W1029 | 95        | 63,5 (2,5“)    | 23.27          | 19,08/19,20                   | 12.7           | 31.75          |



### 60648



#### Material

Urethane bonded to a steel insert. Hardness from 35-80 durometer (Shore A).

#### Technical Notes

A clutch bearing allows the roller to turn in only one direction. Available in left or right

hand rotation (with the stud pointed upwards, a right hand rotation turns clockwise).

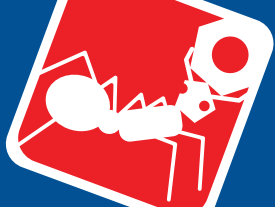
Type R= right hand clutch bearing.

Type L= left hand clutch bearing.

#### Tips

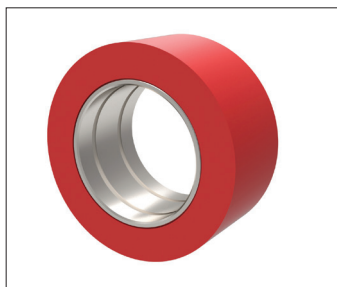
Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-damaging contact. All clutch bearing are type I. Please see technical page for more information on the bearing.

| Order No.   | Type | Durometer | d <sub>1</sub> | l <sub>1</sub> | d <sub>2</sub><br>min./max. | l <sub>2</sub> | d <sub>3</sub> | l <sub>3</sub> | l <sub>4</sub> | l <sub>5</sub> |
|-------------|------|-----------|----------------|----------------|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| 60648.W1003 | R    | 35        | 63,50 (2,5")   | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1006 | R    | 60        | 63,50 (2,5")   | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1008 | R    | 80        | 63,50 (2,5")   | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1013 | L    | 35        | 63,50 (2,5")   | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1016 | L    | 60        | 63,50 (2,5")   | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1018 | L    | 80        | 63,50 (2,5")   | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1023 | R    | 35        | 63,50 (2,5")   | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1026 | R    | 60        | 63,50 (2,5")   | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1028 | R    | 80        | 63,50 (2,5")   | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1033 | L    | 35        | 63,50 (2,5")   | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1036 | L    | 60        | 63,50 (2,5")   | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1038 | L    | 80        | 63,50 (2,5")   | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1043 | R    | 35        | 101,60 (4")    | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1046 | R    | 60        | 101,60 (4")    | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1048 | R    | 80        | 101,60 (4")    | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1053 | L    | 35        | 101,60 (4")    | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1056 | L    | 60        | 101,60 (4")    | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1058 | L    | 80        | 101,60 (4")    | 23.37          | 15,77/15,82                 | 45.47          | 1/2-13"        | 26.42          | 3.05           | 10.41          |
| 60648.W1063 | R    | 35        | 101,60 (4")    | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1066 | R    | 60        | 101,60 (4")    | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1068 | R    | 80        | 101,60 (4")    | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1073 | L    | 35        | 101,60 (4")    | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1076 | L    | 60        | 101,60 (4")    | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |
| 60648.W1078 | L    | 80        | 101,60 (4")    | 49.28          | 15,77/15,82                 | 31.75          | 1/2-13"        | 12.70          | 10.92          | -              |

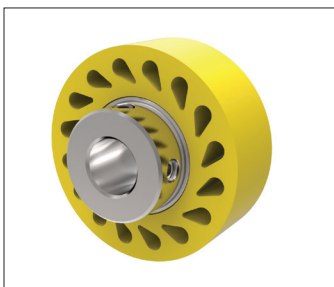


## Wixroyd Rollers

### Product overview



**Solid rollers** - have a smooth surface and a solid body

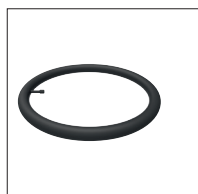


**Durossoft rollers** - have a smooth contact surface with teardrop holes to allow greater roller compression under load.

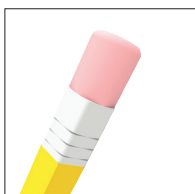


**Finned rollers** - are grooved and provide self-cleaning as dirt, debris and liquid pass under the contact surface of the roller.

### Durability levels



20 durometer:  
Stiff foam rubber



35 durometer:  
Pencil rubber top



60 durometer:  
Car tyre

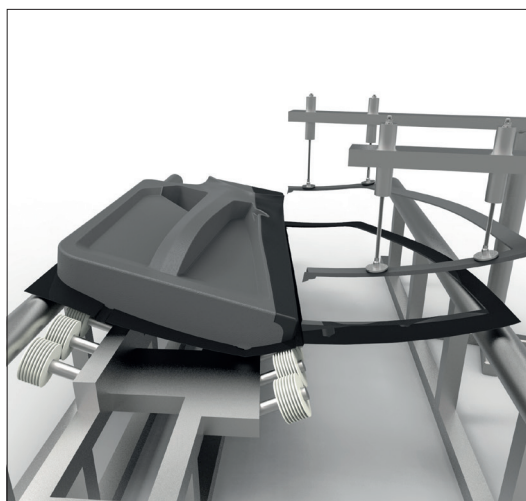


80 durometer:  
Skateboard wheel

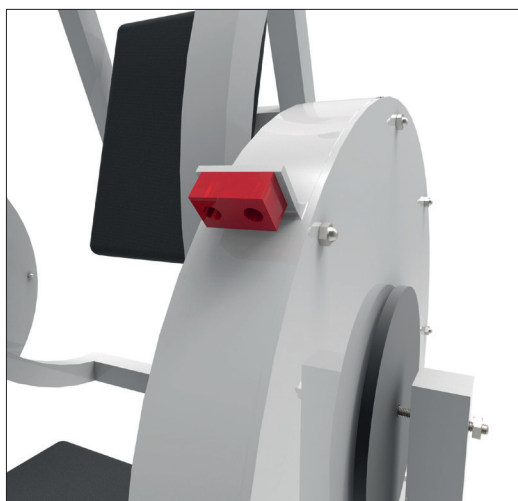


90 durometer:  
Hockey puck

### Applications



Rollers are used in car manufacturing to guide and align doors during bonding and curing applications

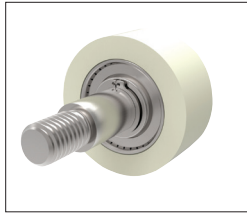


Bumpers have found their way into commercial exercise equipment to provide protection and stability during use.



## Materials colour guide and properties

### Nitrile and neoprene

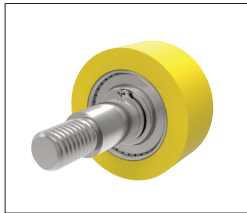


Nitrile - one colour

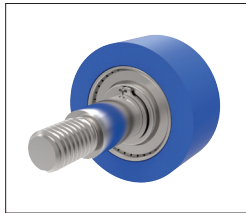


Neoprene - one colour

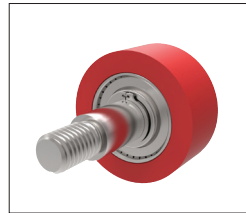
### Urethane



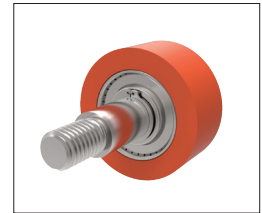
35 Durometer (Yellow)



60 Durometer (Blue)



80 Durometer (Red)



95 Durometer (Orange)

### Material properties

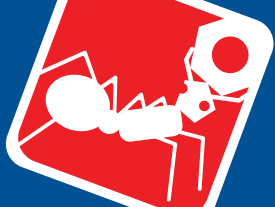
| Base Elastomer | Chemical Name              | Advantages                                                                                                        | Disadvantages                                                  | Max. Temp                             | Min. Temp |
|----------------|----------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------|-----------|
| Nitrile        | Nitrile Butadiene          | Resistant to petroleum, oil, alcohol & abrasion.                                                                  | Affected by degreaser solvents.                                | Continuous 79°C<br>Intermittent 107°C | -51°C     |
| Neoprene       | Chloroprene                | Flame and weather resistant.<br>Resistant to Petroleum, oil, ozone & high temp.                                   | Affected by phosphate hydraulic fluids, aromatic hydrocarbons. | Continuous 93°C<br>Intermittent 121°C | -40°C     |
| Urethane       | Di-Isocyanate Polyurethane | Highest abrasion resistance, strength & load bearing. High elongation, hardness.<br>Resistance to Ozone & Oxygen. | Affected by ether, esters, acid, aromatics, alkalis.           | Continuous 93°C<br>Intermittent 121°C | -54°C     |

| Property:           | Nitrile | Neoprene | Urethane |
|---------------------|---------|----------|----------|
| Tensile Strength    | ✓ ✓     | ✓ ✓ ✓    | ✓ ✓ ✓ ✓  |
| Ozone Resistance    | ✓       | ✓ ✓      | ✓ ✓ ✓ ✓  |
| Cut Resistance      | ✓ ✓     | ✓ ✓ ✓    | ✓ ✓ ✓ ✓  |
| Abrasion Resistance | ✓ ✓     | ✓ ✓ ✓    | ✓ ✓ ✓ ✓  |

| Resistance To:     | Nitrile | Neoprene   | Urethane |
|--------------------|---------|------------|----------|
| Compression Set    | ✓ ✓     | ✓ ✓ ✓      | ✓ ✓ ✓    |
| ASTM #1 Oil        | ✓ ✓ ✓ ✓ | ✓ ✓        | ✓ ✓ ✓ ✓  |
| ASTM #2 Oil        | ✓ ✓ ✓ ✓ | ✓ ✓        | ✓ ✓ ✓ ✓  |
| Reference Fuel B   | ✓ ✓ ✓ ✓ | ✓ ✓        | ✓ ✓ ✓ ✓  |
| Ketones: MEK       | ✓       | ✓ ✓        | ✓        |
| Aromatics: Toluene | ✓ ✓ ✓   | ✓          | ✓ ✓ ✓ ✓  |
| Aliphatics: Hexane | ✓ ✓ ✓ ✓ | ✓ ✓ ✓      | ✓ ✓ ✓ ✓  |
| Ethyl Acetate      | ✓       | ✓ ✓ ✓      | ✓        |
| Cellosolve         | ✓ ✓     | ✓ ✓ ✓ ✓    | ✓        |
| Methylene Chloride | ✓       | ✓          | ✓ ✓ ✓ ✓  |
| Trichloroethylene  | ✓       | ✓          | ✓ ✓ ✓ ✓  |
| Diethylene Glycol  | ✓ ✓ ✓ ✓ | ✓ ✓ ✓ ✓    | ✓ ✓ ✓    |
| Isopropyl Alcohol  | ✓ ✓ ✓   | ✓ ✓ ✓      | ✓ ✓ ✓    |
| Caustics: 10% NaOH | ✓ ✓ ✓   | ✓ ✓ ✓      | ✓        |
| Acids: H2SO4       | ✓ ✓     | ✓ ✓ ✓      | ✓        |
| Excellent          | ✓ ✓ ✓ ✓ | Good ✓ ✓ ✓ | Fair ✓ ✓ |
|                    |         |            | Poor ✓   |



The tables below show the maximum theoretical radius loads that can be applied to the respective bearings. Refer to individual product tables to identify bearing type supplied with roller.

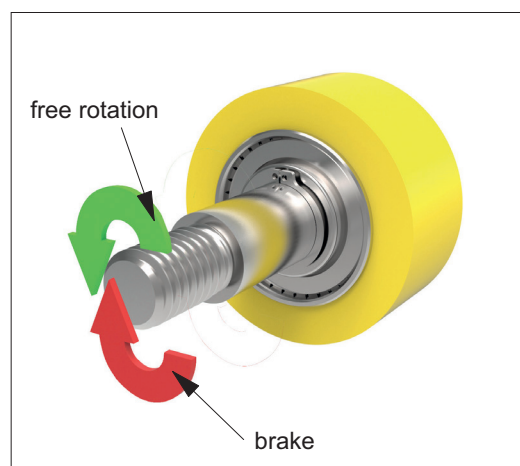
| Bearing Type           | Inside diameter (inches) | Outside diameter (inches) | Width (inches) | Load (Kg) | Speed (rpm) |
|------------------------|--------------------------|---------------------------|----------------|-----------|-------------|
| A -<br>Standard Double | .313/.317                | .870/.875                 | .498/.502      | 55        | 50          |
|                        |                          |                           |                | 36        | 100         |
|                        |                          |                           |                | 24        | 250         |
|                        |                          |                           |                | 20        | 500         |
| B -<br>Standard Single | .500/.505                | 1.245/1.250               | .370/.380      | 119       | 50          |
|                        |                          |                           |                | 79        | 100         |
|                        |                          |                           |                | 51        | 250         |
|                        |                          |                           |                | 47        | 500         |
| C -<br>Standard Double | .500/.505                | 1.245/1.250               | .745/.755      | 192       | 50          |
|                        |                          |                           |                | 128       | 100         |
|                        |                          |                           |                | 83        | 250         |
|                        |                          |                           |                | 70        | 500         |

With the calculations above, typical life is approximately 2500 hours.

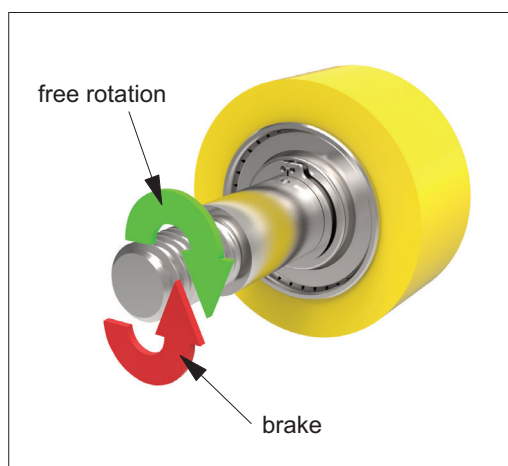
| Bearing Type | Inside diameter (inches) | Outside diameter (inches) | Width (inches) | Load (Kg) | Speed (rpm) |
|--------------|--------------------------|---------------------------|----------------|-----------|-------------|
| H            | .3745/.3750              | .6245/.6255               | .865/.875      | 167       | 33          |
|              |                          |                           |                | 146       | 50          |
|              |                          |                           |                | 116       | 100         |
|              |                          |                           |                | 85        | 250         |
| I            | .6245/.6250              | .8745/.8755               | .990/1.000     | 277       | 33          |
|              |                          |                           |                | 242       | 50          |
|              |                          |                           |                | 192       | 100         |
|              |                          |                           |                | 142       | 250         |

With the calculations above, typical life is approximately 1,000,000 revolutions or 500 hours. The bearings are shielded and pre-lubricated for life with grease.

A clutch roller can only be used in one direction, as shown. See data table for clutch direction of particular part.



Left clutch bearing



Right clutch bearing

### Standard bearings

### Clutch bearings