

# UtiliTrak®

## Linear Guide

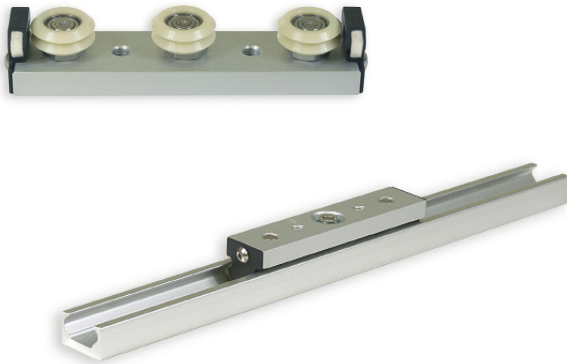
Built on  
**DUALVEE**  
Motion Technology®



## UtiliTrak Applications

The UtiliTrak linear guide is designed for applications where low cost, easy installation and minimal maintenance requirements are the primary design objectives. Constructed with DualVee Motion Technology, UtiliTrak offers high reliability, easy installation and low maintenance in a sleek, compact design.

Designed primarily for transport type applications, UtiliTrak is intended for use where load capacity, stiffness, and positional accuracy are less demanding than machine tool grade applications. UtiliTrak offers a low cost alternative to square rail recirculating element technologies, which often require a significant amount of surface preparation, adding significantly to the total installed cost.



- Antifriction operation
- Low noise
- Smooth running
- High speed capacity
- Unlimited travel lengths
- High load capacity
- Impervious to contamination

## What's Inside

3, 4 or 5-wheel carriage\* assemblies with the guide wheels mounted in-line roll along (and are captured within) the channel guide rail. For the 3 and 4-wheel carriages, the two outside guide wheels are concentric, while the center wheels are eccentric. The 5-wheel carriage features concentric center wheel and outer wheels and eccentric second and fourth wheels.

Fit up is pre-set at the factory, but is easily field adjusted by rotating the eccentrically mounted center guide wheels. This allows modification of running characteristics such as drag, breakaway force and preload.

Each carriage assembly includes a standard lubricator, which distributes a light coat of oil along the length of the channel during normal operation. Lubrication of the channel increases life and speed capacity.

\*PW Series polymer and CR Series stainless steel composite wheel carriages available in 3-wheel configuration only.

|  |       |
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## Application and Design Assistance

888.580.8272

925.439.8272

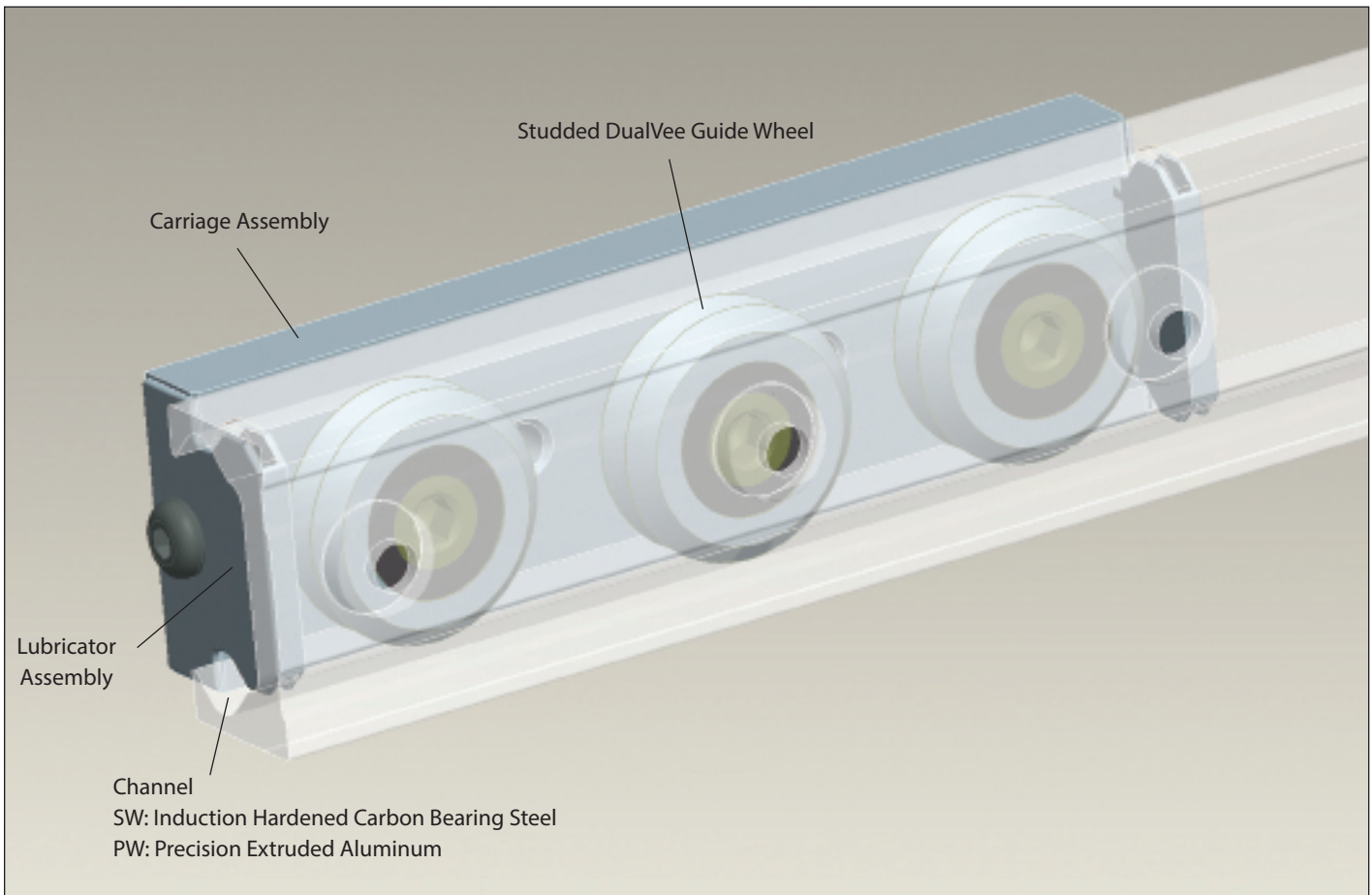
## 3D Modeling and CAD Drawings

[www.bwc.com](http://www.bwc.com)

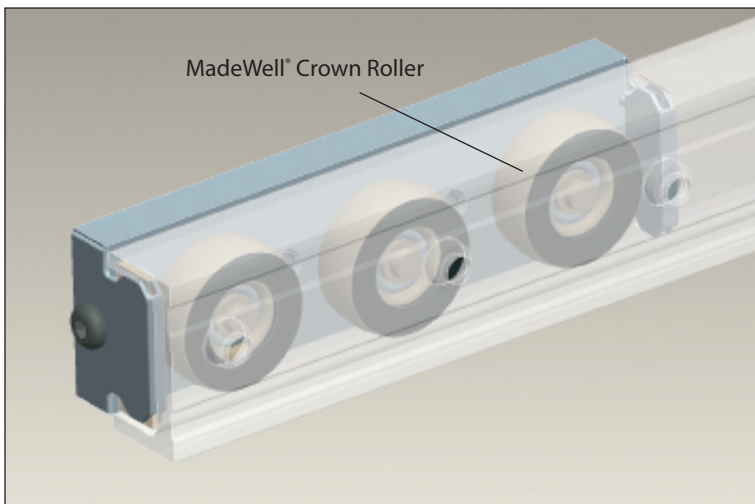
## Product Comparison and Overview

| Features                     | SW Series UtiliTrak   | PW Series UtiliTrak   | CR Series Stainless Steel Composite UtiliTrak   |
|------------------------------|---|---|---|
| Channel/Channel Assembly     | One-piece ground carbon bearing steel channel, running surface smooth to Ra 0.8µm, hardened steel raceways, RoHS compliant anti-corrosion plated. | 6063-T6 aluminum alloy channel  | Induction heat treated 420 stainless steel DualVee track mounted to an extruded aluminum channel          |
| Studded DualVee Guide Wheels | 52100 carbon steel, ground, double row, angular contact bearing arrangement, available sealed or shielded, internal lubrication                   | High temp polymer overmoulded on a stainless steel bearing arrangement, built-in wiper caps at each end clear debris from the channel surface                   | 440C stainless steel, double row, angular contact bearing arrangement, sealed                             |
| MadeWell Crown Rollers       | 52100 carbon steel, ground, double row, angular contact bearing arrangement, available sealed or shielded, internal lubrication                   | High temp polymer overmoulded on a stainless steel single row deep groove conrad bearing, built-in wiper caps at each end clear debris from the channel surface |   |
| Wheel Sizes                  | 1, 2 and 3  | 0, 1 and 2  | 1, 2 and 3  |
| Carriage Assembly            | 3, 4 or 5-wheel configuration   | 3-wheel configuration only  | 3-wheel configuration only  |
| Lubricator & Wiper Assembly  | Nylon end cap with felt lubricator, one lubricator assembly on each end, synthetic oil  | Nylon end cap with felt lubricator, one lubricator assembly on each end, synthetic oil  | Stainless steel stamped felt lubricator with synthetic oil, centrally located lubricator                  |
| Load Capacity                | Up to 14,040N   | Up to 311N  | Up to 5,739N  |
| Speeds                       | Up to 5.5 m/s   | Up to 1.5 m/s   | Up to 5.5 m/s   |
| Acceleration                 | To 5 g's  | To 3 g's  | To 5 g's  |
| Key Benefits                 | High speeds, excellent load capacity, smooth antifriction operation, debris tolerant  | Lowest installed cost in its class, corrosion resistant, low noise, lightweight, wear resistant   | High speeds, excellent load capacity, smooth antifriction operation, debris tolerant, corrosion resistant |

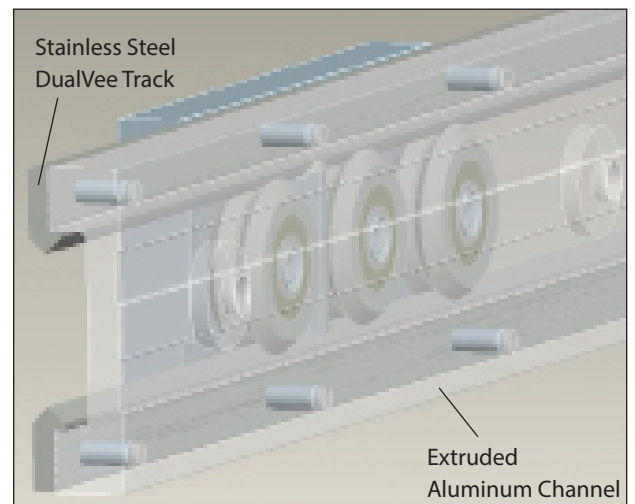
### DualVee Wheel and Vee Channel Assembly



### MadeWell® Crown Roller & Open Channel Assembly



### CR Series Stainless Steel Composite Assembly



## 3-Wheel Assemblies and Channel

### PW/SW Series DualVee 3-Wheel Assembly

#### PW Series

- Vee style assembly for PW Series aluminum channel
- Light to medium duty transport applications
- Extremely low noise
- Lightweight and economical

#### SW Series

- Vee style assembly for SW Series steel channel
- Medium to heavy duty transport applications
- High speed capacity
- Smooth antifriction operation

#### Dimensions

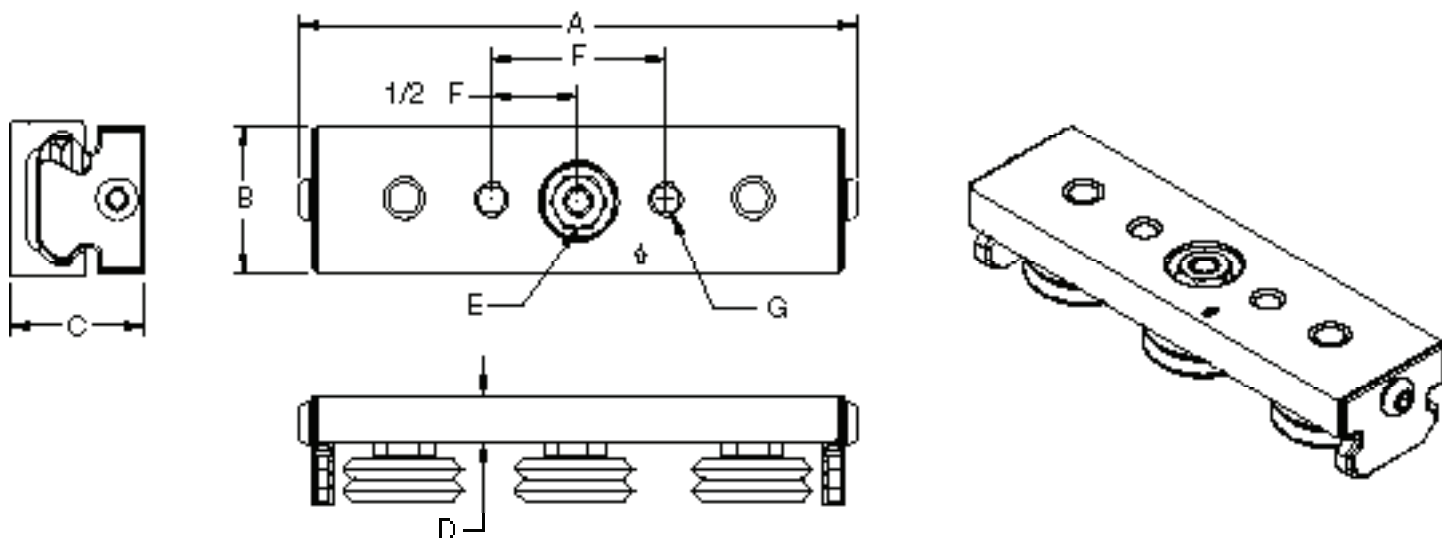
| UtiliTrak Size | PW p/n  | SW <sup>1</sup> p/n | A     | B  | C    | D    | E Socket Size | F  | G       |
|----------------|---------|---------------------|-------|----|------|------|---------------|----|---------|
| 0              | UT0WPAP | -                   | 79.9  | 18 | 22   | 7.9  | 8             | 22 | M4x0.7  |
| 1              | UT1WPAP | UT1WPA              | 113.5 | 24 | 26.3 | 8.8  | 10            | 40 | M6x1    |
| 2              | UT2WPAP | UT2WPA              | 144.2 | 38 | 35   | 11.8 | 13            | 45 | M8x1.25 |
| 3              | -       | UT3WPA              | 201.3 | 55 | 50   | 15.8 | 15            | 60 | M10x1.5 |

All dimensions in mm

#### Load Capacity (Max)

| UtiliTrak Size | Radial $F_R$       | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C   | Radial $F_R$       | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C     |
|----------------|--------------------|-------------|-------|-------|-------|-----|--------------------|-------------|-------|-------|-------|-------|
|                | PW Series Carriage |             |       |       |       |     | SW Series Carriage |             |       |       |       |       |
| 0              | 55                 | 88          | 3     | 1.5   | 1     | 130 | -                  | -           | -     | -     | -     | -     |
| 1              | 110                | 155         | 8     | 3     | 2     | 200 | 2440               | 719         | 18    | 30.5  | 7     | 5600  |
| 2              | 165                | 311         | 18    | 8     | 4     | 350 | 5300               | 1475        | 58    | 100   | 22.7  | 10200 |
| 3              | -                  | -           | -     | -     | -     | -   | 11800              | 5100        | 229   | 346   | 118   | 21600 |

Loads in N, Moment loads in Nm



#### Notes

1. SW series comes standard with shielded wheels, for wheels with Nitrile seals add "X" to the end of the p/n as follows: UTOWPAPX, UT1PAX.
2. See page 13 for Load / Life formulas.
3. See page 12 for mounting orientation.

## PW/SW Series Vee Channel

### PW Series

- Matched component for PW Series Vee carriage assemblies
- 6063-T6 aluminum alloy channel
- Light weight

### SW Series

- Matched component for SW Series Vee carriage assemblies
- Carbon bearing steel with hardened steel raceways
- Running surface smooth to Ra 0.8µm

## Dimensions

| UtiliTrak Size | PW p/n | SW p/n | H    | J   | K  | L Max <sup>3</sup> | M                 | N Dia x Depth (Counterbore) <sup>4</sup> | O (Mounting Hole) | Recommended Fastener <sup>5</sup> | P  |
|----------------|--------|--------|------|-----|----|--------------------|-------------------|--|-------------------|-----------------------------------|----|
| 0              | UTTA0  | -      | 11   | 4   | 20 | 3600               | See formula below | 8.3 x 3                                  | 4.8               | M4                                | 80 |
| 1              | UTTA1  | UTTS1  | 15   | 4   | 26 | 3600               |                   | 10 x 2.8                                 | 5.8               | M5                                | 80 |
| 2              | UTTA2  | UTTS2  | 19.7 | 4.5 | 40 | 3600               |                   | 14.3 x 3                                 | 8.8               | M8                                | 80 |
| 3              | -      | UTTS3  | 30   | 8   | 58 | 3600               |                   | 14.3 x 5                                 | 8.8               | M8                                | 80 |

All dimensions in mm

## Weights

| UtiliTrak Size | Channel Weight (Kg/m) | Carriage Weight (g) | Channel Weight (Kg/m) | Carriage Weight (g) |
|----------------|-----------------------|---------------------|-----------------------|---------------------|
|                | PW Series             |                     | SW Series             |                     |
| 0              | 0.3                   | 46                  | -                     | -                   |
| 1              | 0.5                   | 92                  | 1.46                  | 114                 |
| 2              | 0.93                  | 243                 | 2.7                   | 330                 |
| 3              | -                     | -                   | 5.91                  | 943                 |

To Calculate M:

**Step 1:** Calculate number of spaces

$\text{Length (in mm)} - X = \# \text{ of spaces (round down to nearest whole number)}$

80

X = 14 (size 0)

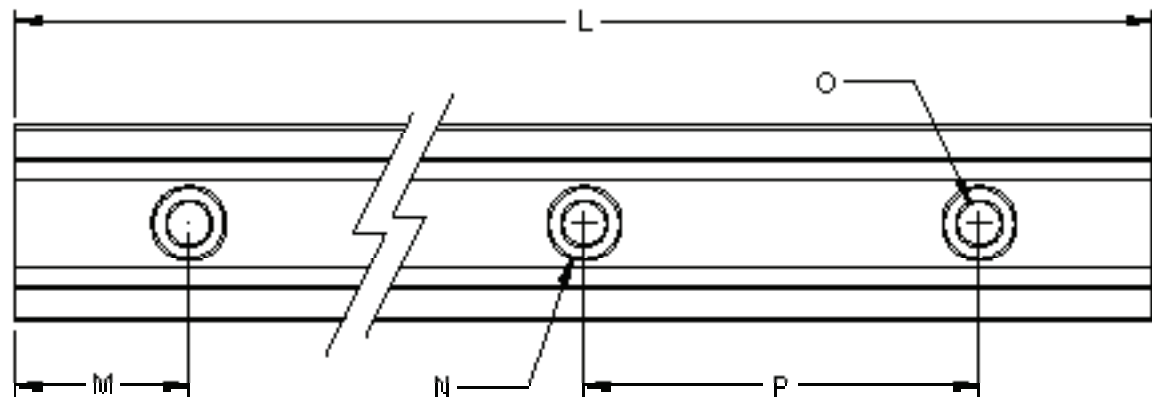
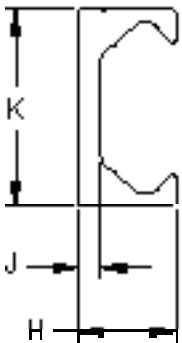
X = 16 (size 1)

X = 18 (size 2)

X = 20 (size 3)

**Step 2:** Calculate M

$\frac{\text{Length} - (\# \text{ of spaces} \times 80)}{2} = M$



## Notes

1. "L" is maximum one piece length.
2. For ordering add length in mm after p/n. Ex. UTTA0-1000 (one meter length).
3. Overall length +/- 2 mm.
4. Counterbore hole tolerance is +/- 0.005.
5. Low head socket cap screw.

## 3-Wheel Assemblies and Channel

### PW Series

- Crown roller style assembly for PW Series aluminum channel
- Intended for radial loads only
- Extremely low noise
- Lightweight and economical

### PW/SW Series MadeWell Crown Roller 3-Wheel Assembly

### SW Series

- Crown roller style assembly for SW Series steel channel
- Intended for radial loads only
- High speed capacity
- Smooth antifriction operation

### Dimensions

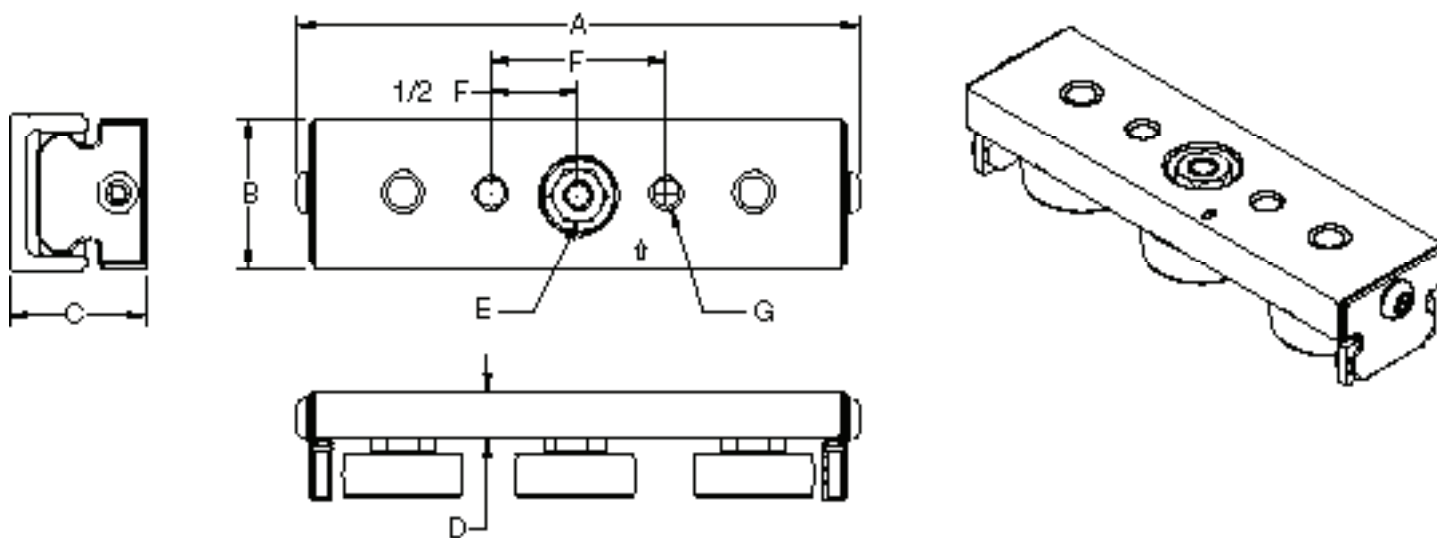
| UtiliTrak Size | PW p/n   | SW <sup>1</sup> p/n | A     | B  | C Min-Max | D    | E Socket Size | F  | G       |
|----------------|----------|---------------------|-------|----|-----------|------|---------------|----|---------|
| 0              | UT0WPAPR | -                   | 79.9  | 18 | 22-23.1   | 7.9  | 8             | 22 | M4x0.7  |
| 1              | UT1WPAPR | UT1WPAR             | 113.5 | 24 | 25.3-27.6 | 8.8  | 10            | 40 | M6x1    |
| 2              | UT2WPAPR | UT2WPAR             | 144.2 | 38 | 34.7-37.4 | 11.8 | 13            | 45 | M8x1.25 |
| 3              | -        | UT3WPAR             | 201.3 | 55 | 46.9-53.4 | 15.8 | 15            | 60 | M10x1.5 |

All dimensions in mm

### Load Capacity (Max)

| UtiliTrak Size | Radial $F_R$       | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C   | Radial $F_R$       | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C     |
|----------------|--------------------|-------------|-------|-------|-------|-----|--------------------|-------------|-------|-------|-------|-------|
|                | PW Series Carriage |             |       |       |       |     | SW Series Carriage |             |       |       |       |       |
| 0              | 55                 | 0           | 0     | 1.5   | 0     | 130 | -                  | -           | -     | -     | -     | -     |
| 1              | 110                | 0           | 0     | 3     | 0     | 200 | 2440               | 0           | 0     | 30.5  | 0     | 5600  |
| 2              | 165                | 0           | 0     | 8     | 0     | 350 | 5300               | 0           | 0     | 100   | 0     | 10200 |
| 3              | -                  | -           | -     | -     | -     | -   | 11800              | 0           | 0     | 346   | 0     | 21600 |

Loads in N, Moment loads in Nm



### Notes

1. SW series comes standard with shielded wheels, for wheels with Nitrile seals add "X" to the p/n as follows: UT1WPAXR, UT2WPAXR, UT3WPAXR.
2. See page 13 for Load / Life formulas.
3. See page 12 for mounting orientation.

## PW/SW Series Open Channel

### PW Series

- Matched component for PW Series MadeWell crown roller carriage assemblies
- 6063-T6 aluminum alloy channel
- Light weight

### SW Series

- Matched component for SW Series crown roller carriage assemblies
- Carbon bearing steel with hardened steel raceways
- Running surface smooth to Ra 0.8µm

## Dimensions

| UtiliTrak Size | PW p/n | SW p/n | H    | J   | K  | L Max <sup>4</sup> | M                 | N Dia x Depth (Counterbore) <sup>5</sup> | O (Mounting Hole) | Recommended Fastener <sup>6</sup> | P  |
|----------------|--------|--------|------|-----|----|--------------------|-------------------|--|-------------------|-----------------------------------|----|
| 0              | UTTRA0 | -      | 11   | 4   | 20 | 3600               | See formula below | 8.3 x 3                                  | 4.8               | M4                                | 80 |
| 1              | UTTRA1 | UTTRS1 | 15   | 4   | 26 | 3600               |                   | 10 x 2.8                                 | 5.8               | M5                                | 80 |
| 2              | UTTRA2 | UTTRS2 | 19.7 | 4.5 | 40 | 3600               |                   | 14.3 x 3                                 | 8.8               | M8                                | 80 |
| 3              | -      | UTTRS3 | 30   | 8   | 58 | 3600               |                   | 14.3 x 5                                 | 8.8               | M8                                | 80 |

All dimensions in mm

## Weights

| UtiliTrak Size | Channel Weight (Kg/m) | Carriage Weight (g) | Channel Weight (Kg/m) | Carriage Weight (g) |
|----------------|-----------------------|---------------------|-----------------------|---------------------|
|                | PW Series             |                     | SW Series             |                     |
| 0              | 0.29                  | 47                  | -                     | -                   |
| 1              | 0.43                  | 94                  | 1.33                  | 121                 |
| 2              | 0.8                   | 246                 | 2.47                  | 320                 |
| 3              | -                     | -                   | 5.36                  | 910                 |

To Calculate M:

**Step 1:** Calculate number of spaces

$\text{Length (in mm)} - X = \# \text{ of spaces (round down to nearest whole number)}$

80

X = 14 (size 0)

X = 16 (size 1)

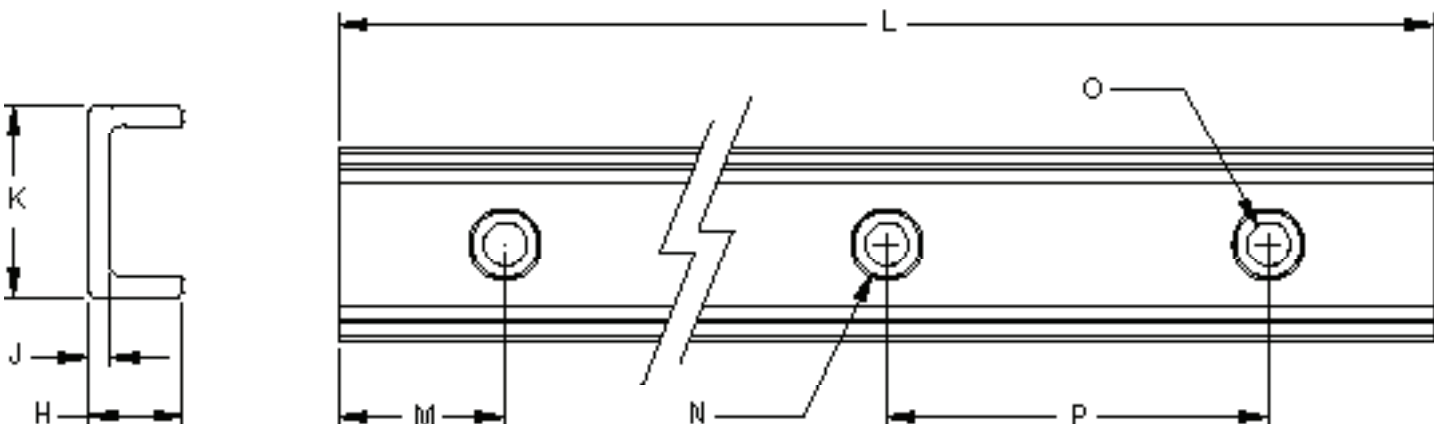
X = 18 (size 2)

X = 20 (size 3)

**Step 2:** Calculate M

$\text{Length} - (\# \text{ of spaces} \times 80) = M$

2



## Notes

1. "L" is maximum one piece length.
2. For ordering add length in mm after p/n. Ex. UTTRA0-1000 (one meter length).
3. Any length up to "L" can be provided, for optimal price and delivery use "M" end spacing on both sides.
4. Overall length +/- 2 mm.
5. Counterbore hole tolerance is +/- 0.005.
6. Low head socket cap screw.

# 4 and 5-Wheel Assemblies

## SW Series DualVee 4 and 5-Wheel Assembly

- Vee style extended carriage for SW Series steel channel
- UtiliTrak's highest load capacity
- Larger surface area

### Dimensions

| UtiliTrak Size | 4-Wheel <sup>1</sup> p/n | 5-Wheel <sup>1</sup> p/n | A     | B  | C    | D    | E Socket Size | F  | G       |
|----------------|--------------------------|--------------------------|-------|----|------|------|---------------|----|---------|
| 1              | UT1WPA-4A                | UT1WPA-5A                | 166.5 | 24 | 26.3 | 8.8  | 10            | 35 | M6x1    |
| 2              | UT2WPA-4A                | UT2WPA-5A                | 224.2 | 38 | 35   | 11.8 | 13            | 45 | M8x1.25 |
| 3              | UT3WPA-4A                | UT3WPA-5A                | 317.3 | 55 | 50   | 15.8 | 15            | 60 | M10x1.5 |

All dimensions in mm

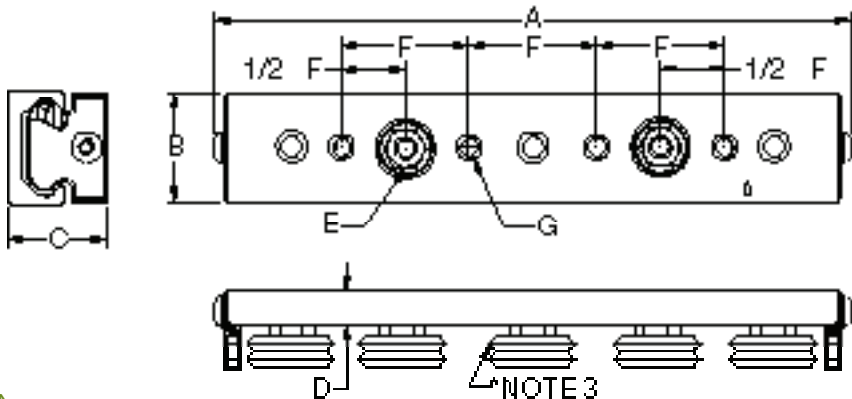
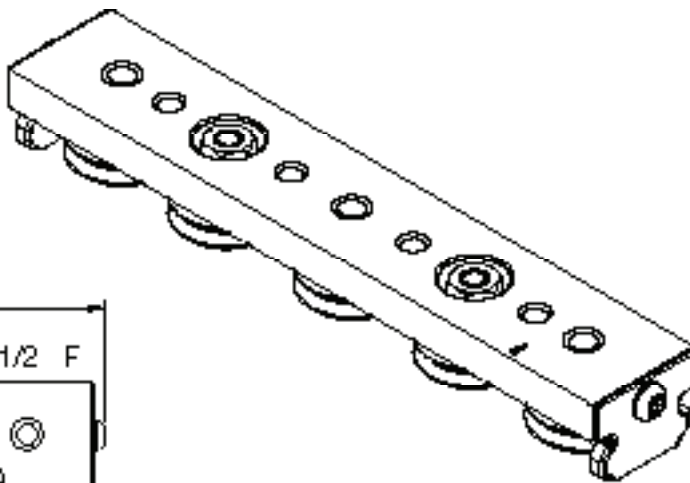
### Load Capacity (Max)

| UtiliTrak Size | Radial F <sub>R</sub> | Axial F <sub>A</sub> | M <sub>P</sub> | M <sub>V</sub> | M <sub>R</sub> | C     | Radial F <sub>R</sub> | Axial F <sub>A</sub> | M <sub>P</sub> | M <sub>V</sub> | M <sub>R</sub> | C     |
|----------------|-----------------------|----------------------|----------------|----------------|----------------|-------|-----------------------|----------------------|----------------|----------------|----------------|-------|
|                | 4-Wheel Carriage      |                      |                |                |                |       | 5-Wheel Carriage      |                      |                |                |                |       |
| 1              | 2440                  | 862                  | 18             | 45.8           | 9.8            | 5600  | 2900                  | 1014                 | 18             | 45.8           | 12.6           | 6650  |
| 2              | 5300                  | 1770                 | 58             | 150            | 31.8           | 10200 | 6300                  | 2080                 | 58             | 150            | 40.9           | 12110 |
| 3              | 11800                 | 6122                 | 229            | 519            | 165.2          | 21600 | 14040                 | 7140                 | 229            | 519            | 212.4          | 25650 |

Loads in N, Moment loads in Nm

### Weight

| UtiliTrak Size | SW Series Only              |                             |
|----------------|-----------------------------|-----------------------------|
|                | 4-Wheel Carriage Weight (g) | 5-Wheel Carriage Weight (g) |
| 1              | 163                         | 181                         |
| 2              | 479                         | 543                         |
| 3              | 1370                        | 1533                        |



### Notes

1. SW series comes standard with shielded wheels, for wheels with Nitrile seals add "X" to the p/n as follows: UT1WPAX-4A, UT2WPAX-5A, etc.
2. See page 13 for Load / Life formulas.
3. This wheel omitted on 4-wheel assemblies.
4. See page 12 for mounting orientation.

## SW Series MadeWell Crown Roller 4 and 5-Wheel Assembly

- Crown roller style extended carriage for SW Series steel channel
- UtiliTrak's highest load capacity
- Larger surface area

### Dimensions

| UtiliTrak Size | 4-Wheel <sup>1</sup> p/n | 5-Wheel <sup>1</sup> p/n | A     | B  | C (Min-Max) | D    | E Socket Size | F  | G       |
|----------------|--------------------------|--------------------------|-------|----|-------------|------|---------------|----|---------|
| 1              | UT1WPAR-4A               | UT1WPAR-5A               | 166.5 | 24 | 25.3 - 27.6 | 8.8  | 10            | 35 | M6x1    |
| 2              | UT2WPAR-4A               | UT2WPAR-5A               | 224.2 | 38 | 34.7 - 37.4 | 11.8 | 13            | 45 | M8x1.25 |
| 3              | UT3WPAR-4A               | UT3WPAR-5A               | 317.3 | 55 | 46.9 - 53.4 | 15.8 | 15            | 60 | M10x1.5 |

All dimensions in mm

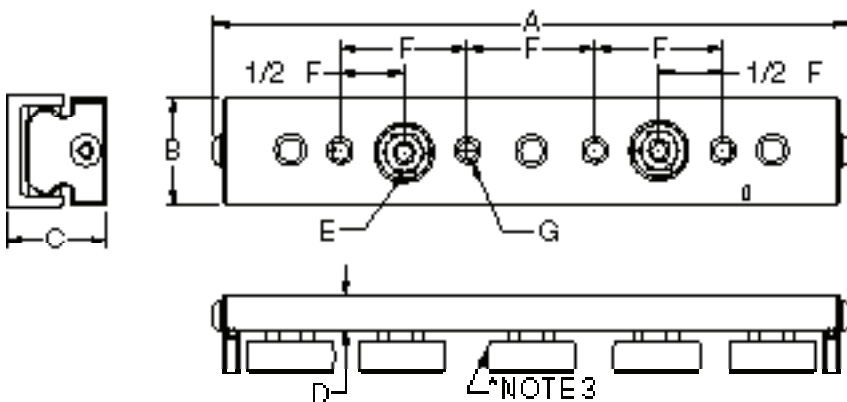
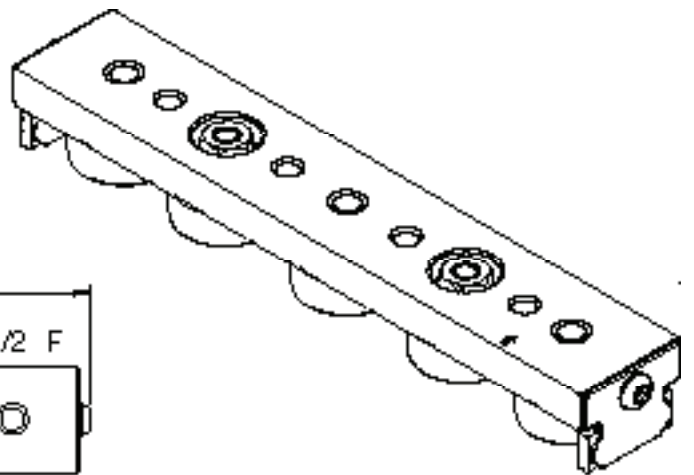
### Load Capacity (Max)

| UtiliTrak Size | Radial $F_R$     | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C     | Radial $F_R$     | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C     |
|----------------|------------------|-------------|-------|-------|-------|-------|------------------|-------------|-------|-------|-------|-------|
|                | 4-Wheel Carriage |             |       |       |       |       | 5-Wheel Carriage |             |       |       |       |       |
| 1              | 2440             | 0           | 0     | 45.8  | 0     | 5600  | 2900             | 0           | 0     | 45.8  | 0     | 6650  |
| 2              | 5300             | 0           | 0     | 150   | 0     | 10200 | 6300             | 0           | 0     | 150   | 0     | 12110 |
| 3              | 11800            | 0           | 0     | 519   | 0     | 21600 | 14040            | 0           | 0     | 519   | 0     | 25650 |

Loads in N, Moment loads in Nm

### Weight

| UtiliTrak Size | SW Series Only              |                             |
|----------------|-----------------------------|-----------------------------|
|                | 4-Wheel Carriage Weight (g) | 5-Wheel Carriage Weight (g) |
| 1              | 195                         | 220                         |
| 2              | 522                         | 598                         |
| 3              | 1478                        | 1665                        |



### NOTES

- Carriages come standard with shielded wheels, for wheels with Nitrile seals add "X" to the p/n as follows: UT1WPAXR-4A, UT2WPAXR-5A, etc.
- See page 13 for Load / Life formulas.
- This wheel omitted on 4 wheel assemblies.
- See page 12 for mounting orientation.

# CR Series Stainless Steel Carriage and Channel Assemblies

## CR Series DualVee 3-Wheel Assembly

- Vee style carriage assembly for stainless steel composite (CR Series) channel
- 440C stainless steel, corrosion resistant
- Available in 3-wheel assembly only

### Dimensions

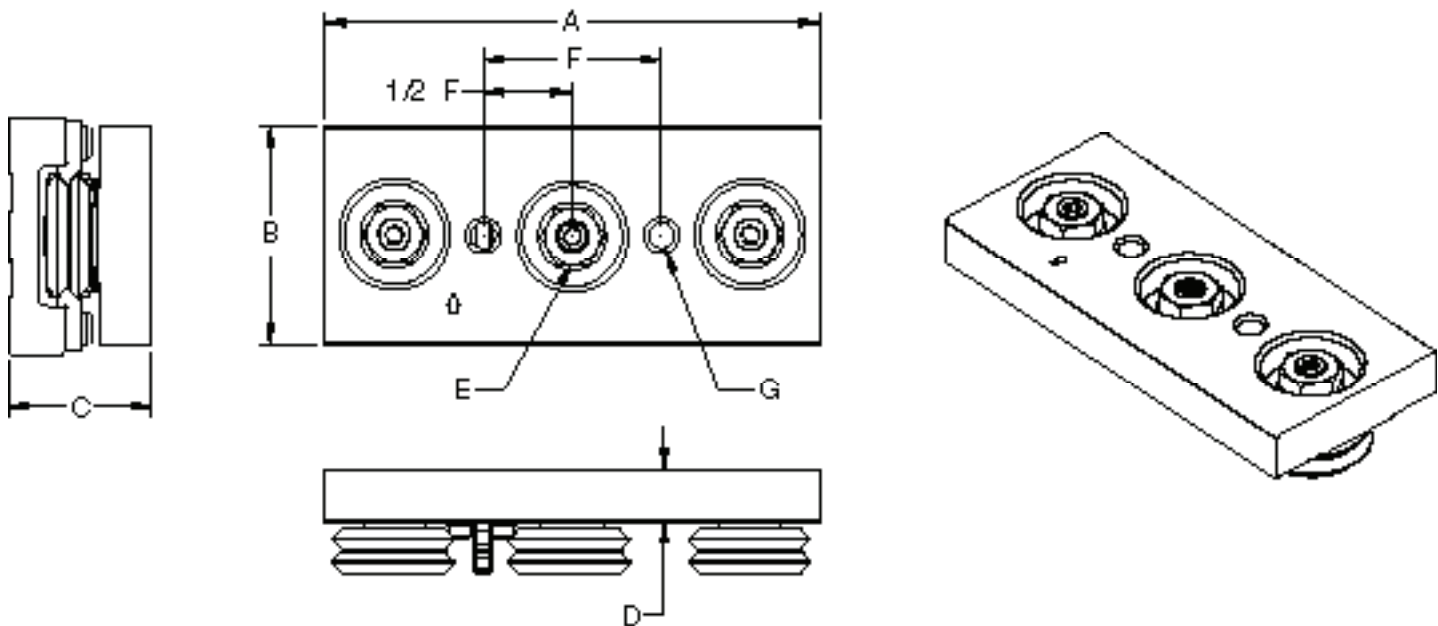
| UtiliTrak Size | Part Number | A   | B  | C  | D    | E Socket Size | F  | G       |
|----------------|-------------|-----|----|----|------|---------------|----|---------|
| 1              | UTCCA1-SS   | 100 | 38 | 28 | 10.1 | 7             | 40 | M6x1    |
| 2              | UTCCA2-SS   | 125 | 55 | 36 | 13.7 | 13            | 45 | M8x1.25 |
| 3              | UTCCA3-SS   | 170 | 80 | 50 | 19.6 | 17            | 60 | M10x1.5 |

All dimensions in mm

### Load Capacity (Max)

| UtiliTrak Size | Radial $F_R$ | Axial $F_A$ | $M_P$ | $M_Y$ | $M_R$ | C    |
|----------------|--------------|-------------|-------|-------|-------|------|
| 1              | 1111         | 705         | 14    | 21    | 3     | 1625 |
| 2              | 2671         | 1749        | 40    | 61    | 9     | 3900 |
| 3              | 5739         | 4763        | 146   | 176   | 35    | 8400 |

Loads in N, Moment loads in Nm



### Notes

1. Clean room or high temperature guide wheel options are available. Contact Bishop-Wisecarver for a quotation.
2. Direction of arrow on carriage plate indicates how the load should be oriented to achieve radial loading on the two concentric guide wheels.
3. For clean room/high temperature compatible guide wheels, add "-227" to the end of the part number.

## CR Series Vee Channel Assembly

- Matched component for CR Series Vee carriage assemblies
- Induction heat treated 420 stainless steel DualVee track mounted to an extruded aluminum channel
- Corrosion resistant
- Several standard lengths to choose from

### Dimensions

| UtiliTrak Size | Part Number       | H    | J   | K  | L Max | M    | N<br>Dia x Depth<br>(Counterbore) <sup>4</sup> | O<br>(Mounting Hole) | Recommended Fastener | P   |
|----------------|-------------------|------|-----|----|-------|------|--|----------------------|----------------------|-----|
| 1              | UTCTPA1-length-SS | 17.7 | 5.9 | 40 | 3490  | 45   | 18.8 x 2                                       | 6.9                  | Pan Head M6          | 100 |
| 2              | UTCTPA2-length-SS | 21.5 | 7.3 | 60 | 3390  | 45   | 25.4 x 3                                       | 8.8                  | Pan Head M8          | 150 |
| 3              | UTCTPA3-length-SS | 29.5 | 9.0 | 85 | 3415  | 82.5 | 28.6 x 5                                       | 10.5                 | Pan Head M10         | 250 |

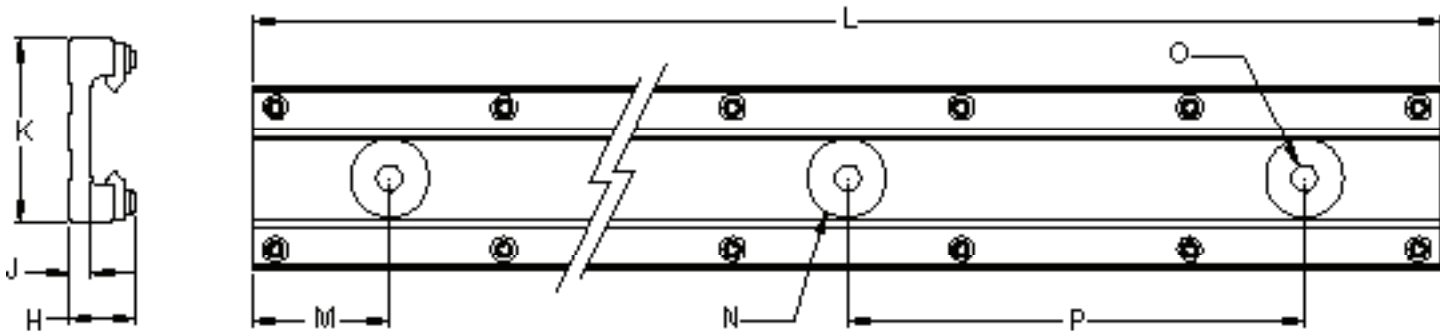
All dimensions in mm

### Standard Lengths (mm)

| Size 1 | Size 2 | Size 3 |
|--------|--------|--------|
| 190    | 240    | 415    |
| 290    | 390    | 665    |
| 390    | 540    | 915    |
| 490    | 690    | 1165   |
| 590    | 840    | 1415   |
| 690    | 990    | 1665   |
| 790    | 1140   | 1915   |
| 890    | 1290   | 2165   |
| 990    | 1440   | 2415   |
| 1090   | 1590   | 2665   |
| 1990   | 2190   | 2915   |
| 2990   | 2790   | 3165   |
| 3490   | 3390   | 3415   |

### Weight

| UtiliTrak Size | Channel Weight (Kg/m) | Carriage Weight (g) |
|----------------|-----------------------|---------------------|
| 1              | 1.457                 | 136                 |
| 2              | 2.591                 | 385                 |
| 3              | 4.884                 | 1107                |



### Notes

1. Contact Bishop-Wisecarver for quotation on non-standard channel lengths.
2. "length" equals channel length in mm in the middle of the UT channel part number.
3. Channel length tolerance is  $\pm 2$  mm.
4. Counterbore hole tolerance is  $\pm 0.005$ .

## Fit up Adjustment

Fit up is pre-set at the factory, but is easily field adjusted by rotating the eccentric guide wheels. This allows modification of running characteristics such as drag and breakaway force.

1. Fit up adjustment should be performed while the carriage is engaged with the channel.
2. Looking down on the top of the carriage, as shown in Fig. 1, the eccentric stud is locked into place with a hex nut.



Fig.1: Fit up adjustment of a UtiliTrak linear guide

3. Loosen the eccentric wheel/stud assembly by turning the hex nut counter-clockwise with a socket wrench.
4. When the wheel/stud assembly is loose enough, it can be rotated with a wrench, as shown in Fig. 2. Rotating the eccentric wheel's stud will adjust the wheel location into or out of mesh with the channel.



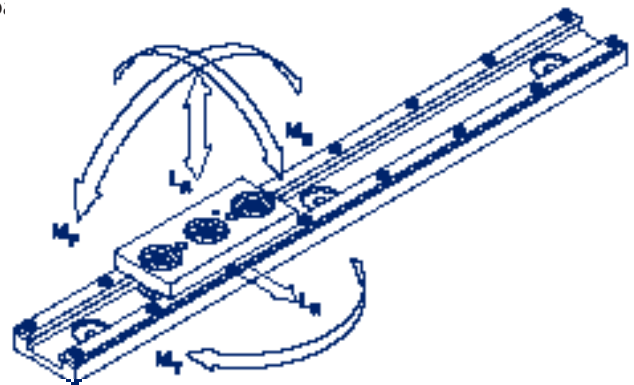
Fig. 2: Fit up adjustment

5. Begin with a small adjustment to the fit up and re-tighten the stud by turning the hex nut clockwise. If the fit up is too loose, the carriage will exhibit excessive play, such as rocking. If the fit up is too tight, the carriage will exhibit excessive drag. Move the carriage up and down the entire channel length to ensure that it does not feel too loose or tight at any given location along the channel. It may take a couple of attempts to find the proper fit up for your system. Take care not to over preload PW Series polymer wheel carriages. It is important for fit up to be correctly adjusted prior to operation.

## Mounting Orientation

The UtiliTrak Vee guide assembly can be employed to accept loads in all orientations. However, it is primarily intended to support loads in the radial plane ( $L_R$ ). As such, it is good engineering practice to orient the slide such that the two outside wheels support the load radially. Each carriage assembly includes an arrow pointing towards the optimal direction of load orientation. Loads oriented in this direction will produce a radial load on each of the concentrically mounted (outer) guide wheels.

The crown roller assembly should be subjected to radial loads.



Close-up of UtiliTrak carriage. Arrow indicates optimal direction of load orientation.

**Bishop-Wisecarver Corporation:** Manufacturer of the original DualVee® guide wheel and industry leader in guided motion technology, and exclusive North and Central American partner and distributor for HepcoMotion products since 1984.

## **BISHOPWISECARVER**®

### **Bishop-Wisecarver**

DualVee® Guide Wheels  
LoPro® Actuated Linear Guidance System  
MadeWell® Crown Rollers  
MinVee® Linear Slide System  
UtiliTrak® Linear Guide



### **HepcoMotion®**

DAPDU2 Double Acting Profile Driven Unit  
DLS Driven Linear System  
DTS Driven Track System  
GV3 Linear Guidance and Transmission System  
HDCB Heavy Duty Compact Beam  
HDCS Heavy Duty Compact Screw  
HDLS Heavy Duty Driven Linear System  
HDRT Heavy Duty Ring Slides and Track System  
HDS2 Heavy Duty Slide System  
MHD Heavy Duty Track Roller Guidance System  
MCS Machine Construction System  
PDU2 Profile Driven Unit  
PDU2M Belt Driven Unit for Moment Loads  
PRT2 Precision Ring and Track System  
PSD80 Screw Driven Linear Actuator  
PSD120 Profile Screw Driven Unit  
SBD Sealed Belt Drive  
Simple-Select®  
SL2 Stainless Steel Based Slide System

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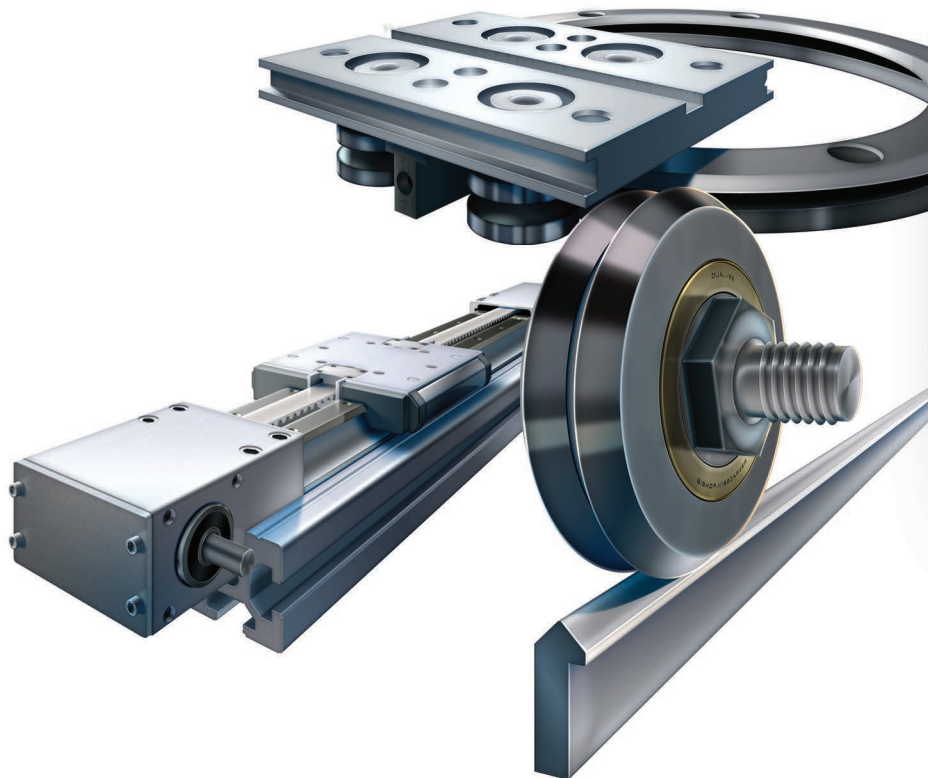
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