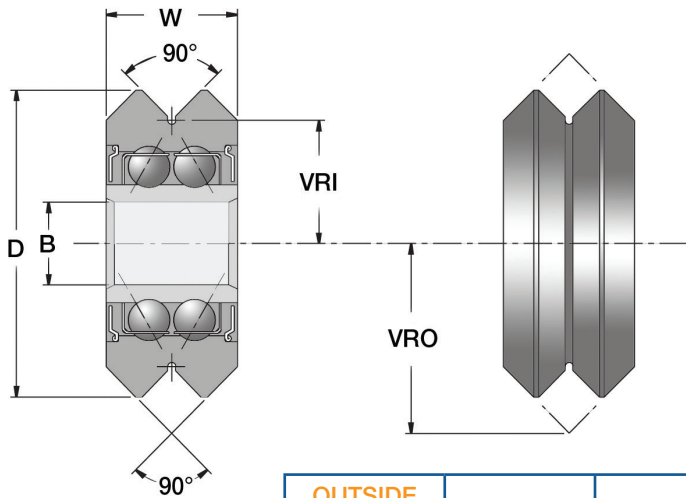


DUALVEE® Vacuum Wheels

Linear Guide Wheels for Ultra High Vacuum Environments

DualVee® Vacuum Wheels are linear guide bearings with precision ground 90-degree surfaces for linear and rotary motion applications in vacuum environments, automated processing equipment and testing chambers. Made of vacuum compatible AISI440C and 304 stainless steel and grease, these guide wheels are capable of ultra high vacuum down to 10⁻⁹ mbar. Mount on AISI 303 DualVee® bushings and run on mating 90-degree AISI 420 track in single piece lengths up to 20 feet. Available in two sizes with load capacities up to 1855N radially, and 440N axially, they are ideal for guided motion in challenging environments.



- Double Row Angular Contact Ball Bearings
 - Support dynamic loads radially and axially
- AISI 440C stainless steel, hardened
 - outer race, inner race, ball material
- AISI 304 stainless steel
 - ball cage, shield material
- Continuous operating temperatures up to +150°C
 - Intermittent temperatures of -35°C to +250°C
- ABEC 1 Precision Class
- Surface finish is Ra 0.4um
- Ultratherm 2000 ultra high vacuum grease

Size	Stock Code	OUTSIDE DIAMETER D	WIDTH W	BORE DIAMETER B	VEE RADIUS INSIDE VRI	VEE RADIUS OUTSIDE VRO	Weight Grams (g)
1	W1SSVAC	Ø.771 [Ø19.58]	.310 [7.87]	Ø.1875 +.0000/- .0003 [Ø4.763 +.000/- .008]	.313 [7.95]	.468 [11.89]	12
2	W2SSVAC	Ø1.210 [Ø30.73]	.438 [11.13]	Ø.3750 +.0000/- .0003 [Ø9.525 +.000/- .008]	.500 [12.70]	.719 [18.26]	39

Dimensions are in inches [millimeters].

Recommended DualVee® Components

BUSHINGS							TRACK			
Size	Material	Style	Inch		Metric		Size	Material	Condition	Stock Code Prefix
			Std. Profile	Low Profile	Std. Profile	Low Profile				
1	AISI 303 Stainless	Concentric	B1SS	1PWBC	MB1SS	M1PWBC	1	AISI 420 Stainless	Hardened	T1SS-
		Eccentric	BX1SS	1PWBX	MBX1SS	M1PWBX			Soft	TS1SS-
2		Concentric	B2SS	2PWBC	MB2SS	M2PWBC	2		Hardened	T2SS-
		Eccentric	BX2SS	2PWBX	MBX2SS	M2PWBX			Soft	TS2SS-

Concentric Bushing



Eccentric Bushing



Linear Track



Sold & Serviced By:



Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

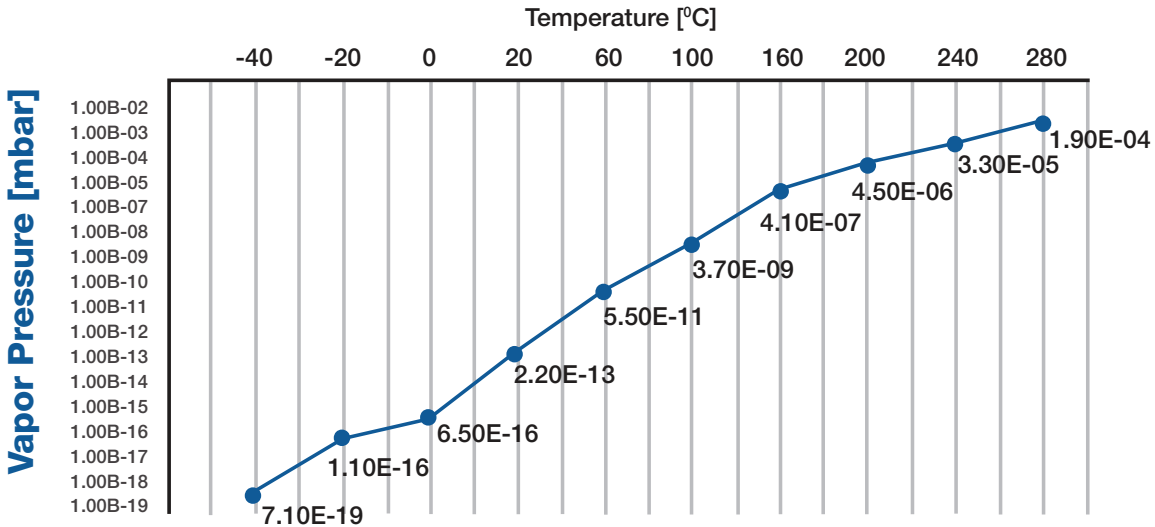
www.electromate.com

sales@electromate.com

DualVee® Vacuum Wheel Grease

Lubcon Ultratherm 2000 grease is used to lubricate internal wheel components and is capable of achieving ultra high vacuum pressure levels with extremely low outgassing rates over a wide range of operating temperatures.

LUBCON Ultratherm 2000 Ultra High Vacuum Grease



OUTGASSING RATES			
TML	Total Mass Loss	0.08%	ASTM E 595-90
CVCM	Collected Volatile Condensable Material	0.01%	
RML	Recovered Mass Loss	0.07%	

Contact Bishop-Wisecarver for additional grease specifications.

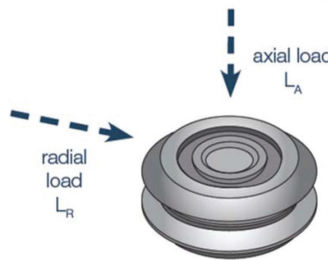


Load and Life Specifications

Radial and Axial Loading

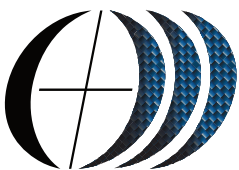
L_R : Radial load refers to the load applied in a direction perpendicular to the axis of rotation.

L_A : Axial load refers to the load applied in a direction parallel to the axis of rotation.



See the DualVee® catalog, pages 39-40 for sizing and life estimate calculations.

Size	Stock Code	Load Ratings				Life Ratings
		Radial L_R		Axial L_A		Travel
		(N)	(lbf)	(N)	(lbf)	(km)
1	W1SSVAC	854	192	178	40	55
2	W2SSVAC	1855	417	440	99	87



For more than 60 years, DualVee Motion Technology® from Bishop-Wisecarver Corporation® has provided linear guide components for the most extreme operating conditions and environments from freezer to oven, cleanroom to extreme grime. DualVee® is easy to understand and easy to assemble enabling very smooth guided motion with low noise and low vibration over long linear lengths in critical applications.

Sold & Serviced By:
 ELECTROMATE
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