

January 22nd, 2020: PRODUCT STATUS NOTIFICATION – UtiliTrak® Load/Life

Bishop-Wisecarver® Corporation is informing you of recent changes within the UtiliTrak® product line. After reviewing the catalog published load capacity specifications, and the life estimate equation, we determined that an update was necessary.

The previously published life equation provides a valid method to determine an estimate of the service life of UtiliTrak® linear guides when used in a variety of applications and operating conditions. However, this method differs significantly from our other life estimate equations, and in several cases, does not tie directly back to the specifications of the individual guide wheel component specifications.

Previous Life Estimate Equation (for reference only, no longer used):

$$L_{Km} = 100 * \left(\frac{C}{F} * \frac{1}{f_c} \right)^3$$

The load/life estimate calculations have been updated in the most recent catalog version, matching the equations that are published in all other BWC product lines. The revised equation uses the life constant, L_c , that comes from the guide wheel components and is the travel distance of 1 million revolutions. Additionally, the environmental factor, F_c , can be selected from 0.1 – 1.0 ensuring less of a derating in ideal operating conditions.

Life Estimate Equation:

$$Life_{km} = \left(\frac{L_c}{(L_F)^3} \right) A_F$$

Please see the technical section of the product catalog, pages 46 & 47 for additional information.

Updates were made to the load capacity of the PW Series wheel plate assemblies to ensure that the specifications are based upon the individual guide wheel components. In several cases the adjusted the load capacities are higher, and in a few cases, the load capacities are significantly lower.

UtiliTrak® PW Series Wheel Plate Load Capacities are located on page 13 of the updated catalog, and on the next page of this document for reference.

UtiliTrak® PW Series Wheel Plate Load Capacities

Wheel Plate Max Load Capacity

	Size	# of Wheels	Stock Code	Mass (g)	Axial L _A		Radial L _R		Pitch M _P		Yaw M _Y		Roll M _R	
					(N)	(lbF)	(N)	(lbF)	(Nm)	(lbF-ft)	(Nm)	(lbF-ft)	(Nm)	(lbF-ft)
90° Vee	0	3	UT0WPAP	46	38	9	53	12	0.6	0.5	0.6	0.5	0.2	0.1
		4	UT0WPAP-4A	60	46	10	53	12	21.1	15.6	1.8	1.3	0.4	0.3
		5	UT0WPAP-5A	90	54	12	63	14	21.1	15.6	1.8	1.3	0.4	0.3
	1	3	UT1WPAP	92	76	17	107	24	2.0	1.5	2.0	1.5	0.5	0.4
		4	UT1WPAP-4A	120	91	20	107	24	61.5	45.4	5.1	3.8	1.0	0.7
		5	UT1WPAP-5A	160	107	24	127	30	61.5	45.4	5.1	3.8	1.0	0.7
	2	3	UT2WPAP	243	94	21	142	32	3.6	2.7	3.2	2.4	1.2	0.9
		4	UT2WPAP-4A	315	113	25	142	32	124.9	92.1	9.3	6.8	2.3	1.7
		5	UT2WPAP-5A	340	133	30	169	38	124.9	92.1	9.3	6.8	2.3	1.7

	Size	# of Wheels	Stock Code	Mass (g)	Axial L _A		Radial L _R		Pitch M _P		Yaw M _Y		Roll M _R	
					(N)	(lbF)	(N)	(lbF)	(Nm)	(lbF-ft)	(Nm)	(lbF-ft)	(Nm)	(lbF-ft)
Crown	0	3	UT0WPAPR	47	0	0	53	12	0	0	0.6	0.5	0	0
		4	UT0WPAPR-4A	60	0	0	53	12	0	0	1.8	1.3	0	0
		5	UT0WPAPR-5A	90	0	0	63	14	0	0	1.8	1.3	0	0
	1	3	UT1WPAPR	94	0	0	107	24	0	0	2.0	1.5	0	0
		4	UT1WPAPR-4A	120	0	0	107	24	0	0	5.1	3.8	0	0
		5	UT1WPAPR-5A	160	0	0	127	30	0	0	5.1	3.8	0	0
	2	3	UT2WPAPR	246	0	0	142	32	0	0	3.2	2.4	0	0
		4	UT2WPAPR-4A	315	0	0	142	32	0	0	9.3	6.8	0	0
		5	UT2WPAPR-5A	340	0	0	169	38	0	0	9.3	6.8	0	0

Questions? Please contact your local representative or Bishop-Wisecarver® Corporation customer service at 1.888.580.8272