



Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. X Lead / Direction of turn	20x20/Right	
Preload / Ball recirculation	P preload / Return tube	
Ball dia. / Ball circle dia.	3.969/21	
Effective turns of balls	1.5x1	
Accuracy grade/ Preload / Axial play	C5/Z	C5/T
Basic load rating (N)	Dynamic $C_a$	5370
	Static $C_{0a}$	8450
Axial play	0	0.005 or less
Dynamic friction torque, (N · cm)	2.0~11.8	~2.9
Spacer ball	Yes	None
Factory packed grease	NSK grease LR3	
Internal spatial volume of nut (cm <sup>3</sup> )	4.2	

Ball screw No.		Stroke	
		Nominal	Maximum (L <sub>1</sub> -Nut length)
Preloaded (LPFT)	Precise clearance (LSFT)		
<b>W2003FA-3P-C5Z20</b>	<b>W2003FA-4-C5T20</b>	200	247
<b>W2004FA-3P-C5Z20</b>	<b>W2004FA-4-C5T20</b>	300	347
<b>W2005FA-3P-C5Z20</b>	<b>W2005FA-4-C5T20</b>	400	447
<b>W2006FA-3P-C5Z20</b>	<b>W2006FA-4-C5T20</b>	500	547
<b>W2007FA-3P-C5Z20</b>	<b>W2007FA-4-C5T20</b>	600	647
<b>W2008FA-3P-C5Z20</b>	<b>W2008FA-4-C5T20</b>	700	747
<b>W2009FA-3P-C5Z20</b>	<b>W2009FA-4-C5T20</b>	800	847
<b>W2010FA-3P-C5Z20</b>	<b>W2010FA-4-C5T20</b>	900	947
<b>W2011FA-3P-C5Z20</b>	<b>W2011FA-4-C5T20</b>	1000	1047
<b>W2012FA-3P-C5Z20</b>	<b>W2012FA-4-C5T20</b>	1100	1147
<b>W2015FA-1P-C5Z20</b>	<b>W2015FA-2-C5T20</b>	1400	1447

Remarks 1. We recommend NSK support unit WBK15-01A (square type, fixed side), WBK15S-01 (square type, simple support side), and WBK15-11 (round type, fixed side).  
 2. NSK grease LR3 is recommended. The amount for replenishing should be about 50% of nut internal space capacity.  
 3. Permissible rotational speed is determined by a  $d \cdot n$  value and a critical speed. See page B509.  
 Root diameter of screw shaft (dr) is 16.9 mm.

Screw shaft length			Lead accuracy			Shaft run-out**	Mass (Kg)	Permissible rotational speed N (min <sup>-1</sup> )	
L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	T	e <sub>p</sub>	v <sub>u</sub>			Supporting condition	
								Fixed - Simple support	Fixed - Fixed
310	335	420	0	0.023	0.018	0.040	1.6	3000	3000
410	435	520	0	0.027	0.020	0.050	1.8	3000	3000
510	535	620	0	0.030	0.023	0.050	2.0	3000	3000
610	635	720	0	0.030	0.023	0.065	2.3	3000	3000
710	735	820	0	0.035	0.025	0.085	2.5	3000	3000
810	835	920	0	0.040	0.027	0.085	2.7	3000	3000
910	935	1020	0	0.040	0.027	0.110	3.0	3000	3000
1010	1035	1120	0	0.046	0.030	0.110	3.2	2590	3000
1110	1135	1220	0	0.046	0.030	0.110	3.4	2140	2970
1210	1235	1320	0	0.046	0.030	0.150	3.7	1790	2500
1510	1535	1620	0	0.054	0.035	0.180	4.4	1140	1610