

9. Reference number

Reference numbers shall be set to individual NSK linear guide when its specifications are finalized, and it is indicated on its specification drawing.

Please specify the reference number, except design serial number, to identify the product when ordering, requiring estimates, or inquiring about specifications from NSK.

(1) Reference number for preloaded assembly

NH 30 1200 ANC 2 -** P5 3			
Series name	Size	Rail length (mm)	Preload code (See page A116.) 0: Z0, 1: Z1, 3: Z3
Ball slide shape code (See page A114.)	Material/surface treatment code (See Table 21.) C: Special high carbon steel (NSK standard), K: Stainless steel	Accuracy code (See Table 22.)	Design serial number Added to the reference number.
			Number of ball slides per rail

(2) Reference number for random-matching type

NAH 30 ANSZ -K	
Random-matching ball slide series code NAH: NH Series random-matching ball slide	Option code -K: Equipped with NSK K1
Size	-F: Fluoride low temperature chrome plating+AS2 grease -F50: Fluoride low temperature chrome plating+LG2 grease
Ball slide shape code (See page A114.)	Preload code No code: Fine clearance, Z: Slight preload, H: Medium preload
Material code No code: Special high carbon steel (NSK standard), S: Stainless steel	

N1H30 1200 LCN -** PC Z			
Random-matching rail series code N1H: NH Series random-matching rail	Size	Preload code (See page A116.) T: Fine clearance Z: Slight preload (common rail for slight or medium preload)	
Rail length (mm)	Rail shape code: L L: Standard	Accuracy code PH: High precision grade random-matching type PC: Normal grade random-matching type	
Material/surface treatment code (See Table 21.)	Design serial number Added to the reference number.	*Butting rail specification N: Non-butting, L: Butting specification	
*Please consult with NSK for butting rail specification.			

The reference number coding for the assembly of random-matching type is the same as that of the preloaded assembly. However, only preload codes of "fine clearance T", "slight preload Z" and "medium preload H" are available (refer to page A116).

Table 21 Material/surface treatment code

Code	Description
C	Special high carbon steel (NSK standard)
K	Stainless steel (NH15 to NH30 only)
D	Special high carbon steel with surface treatment
H	Stainless steel with surface treatment
Z	Other, special

Note: High-precision grade and medium preload of random-matching type are not available in stainless steel.

Table 22 Accuracy code

Accuracy	Standard (Without NSK K1)	With NSK K1	With NSK K1 for food and medical equipment
Ultra precision grade	P3	K3	F3
Super precision grade	P4	K4	F4
High precision grade	P5	K5	F5
Precision grade	P6	K6	F6
Normal grade	PN	KN	FN
High precision grade (random-matching type)	PH	KH	FH
Normal grade (random-matching type)	PC	KC	FC

Note: Refer to pages A38 and A61 for NSK K1 lubrication unit.

10. Dimensions

NH-AN (High-load type / Standard)

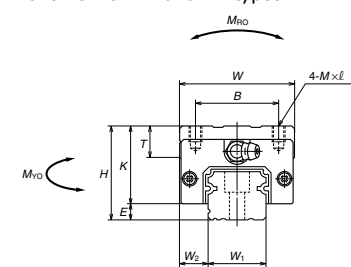
NH-BN (Super-high-load type / Long)

NH 30 1200 ANC 2 - PC Z**

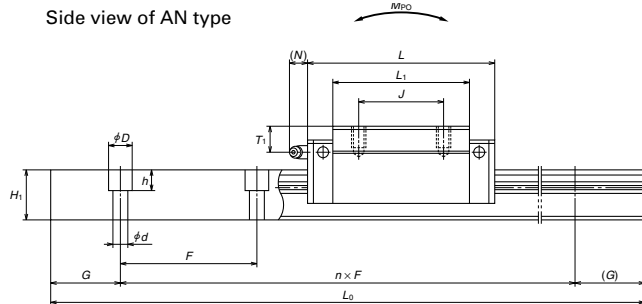
Series name	Preload code (See page A116.)
Size	0: Z0, 1: Z1, 3: Z3, T: ZT, Z: ZZ, H: ZH
Rail length (mm)	Accuracy code (See Table 22.)
Ball slide shape code (See page A114.)	Design serial number
Material/surface treatment code (See Table 21.)	Added to the reference number.
	Number of ball slides per rail

C: Special high carbon steel (NSK standard), K: Stainless steel

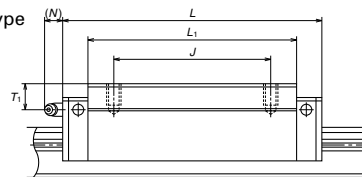
Front view of AN and BN types



Side view of AN type



Side view of BN type



Model No.	Assembly			Ball slide											Width		Height
	Height			Width	Length	Mounting hole						Grease fitting					
								M × pitch × ℓ				Hole size	T ₁	N			
<i>H</i>	<i>E</i>	<i>W</i> ₂	<i>W</i>	<i>L</i>	<i>B</i>	<i>J</i>	M × pitch × ℓ	<i>L</i> ₁	<i>K</i>	<i>T</i>	Hole size	T ₁	N	<i>W</i> ₁	<i>H</i> ₁		
NH15AN NH15BN	28	4.6	9.5	34	55 74	26	26	M4×0.7×6	39 58	23.4	8	ϕ 3	8.5	3.3	15	15	
NH20AN NH20BN	30	5	12	44	69.8 91.8	32	36 50	M5×0.8×6	50 72	25	12	M6×0.75	5	11	20	18	
NH25AN NH25BN	40	7	12.5	48	79 107	35	35 50	M6×1×9	58 86	33	12	M6×0.75	10	11	23	22	
NH30AN NH30BN	45	9	16	60	85.6 124.6	40	40 60	M8×1.25×10	59 98	36	14	M6×0.75	10	11	28	26	
NH35AN NH35BN	55	9.5	18	70	109 143	50	50 72	M8×1.25×12	80 114	45.5	15	M6×0.75	15	11	34	29	
NH45AN NH45BN	70	14	20.5	86	139 171	60	60 80	M10×1.5×17	105 137	56	17	Rc1/8	20	13	45	38	
NH55AN NH55BN	80	15	23.5	100	163 201	75	75 95	M12×1.75×18	126 164	65	18	Rc1/8	21	13	53	44	
NH65AN NH65BN	90	16	31.5	126	193 253	76	70 120	M16×2×20	147 207	74	23	Rc1/8	19	13	63	53	

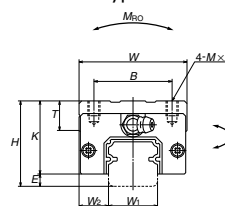
Notes: 1) External appearance of stainless steel ball slides differs from those of carbon steel ball slides.

Reference number for ball slide of random-matching type

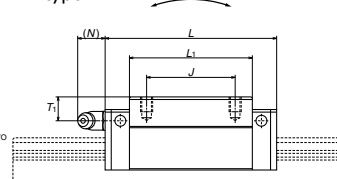
Ball slide **NAH 30 AN S Z -K**

Random-matching ball slide series code	Option code
NAH: NH Series random-matching ball slide	-K: Equipped with NSK K1
Size	-F: Fluoride low temperature chrome plating+AS2 grease
	-F50: Fluoride low temperature chrome plating+LG2 grease
Ball slide shape code (See page A114.)	Preload code
	No code: Fine clearance, Z: Slight preload, H: Medium preload
	Material code
	No code: Special high carbon steel (NSK standard), S: Stainless steel

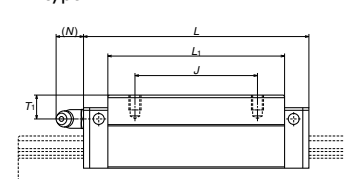
AN and BN types



AN type



BN type

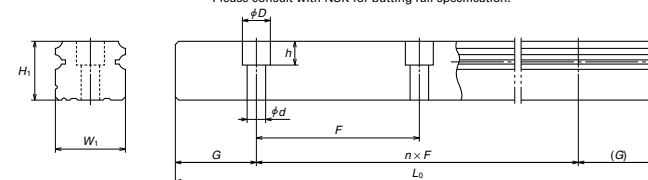


Reference number for rail of random-matching type

Rail **N1H30 1200 L CN -** PC Z**

Random-matching rail series code	Preload code (See page A116.)
N1H: NH Series random-matching rail	T: Fine clearance.
Size	Z: Slight preload (common rail for medium preload)
	Accuracy code
Rail length (mm)	PH: High precision grade, PC: Normal grade
Rail shape code: L	Design serial number
	Added to the reference number.
Rail shape code: L	*Butting rail specification
	N: Non-butting, L: Butting specification
Material/surface treatment code (See Table 21.)	

*Please consult with NSK for butting rail specification.



Unit: mm

Rail				Basic load rating								Weight	
Pitch <i>F</i>	Mounting bolt hole <i>d</i> × <i>D</i> × <i>h</i>	G (reference)	Max. length <i>L</i> _{0max} () for stainless	^a Dynamic		Static	Static moment (N·m)				Ball slide (kg)	Rail (kg/m)	
				[50km] <i>C</i> ₅₀ (N)	[100km] <i>C</i> ₁₀₀ (N)	<i>C</i> ₀ (N)	<i>M</i> _{RO}	<i>M</i> _{RO}		<i>M</i> _{VO}			
								One slide	Two slides	One slide			Two slides
60	4.5×7.5×5.3	20	2 980 (1 800)	14 200 18 100	11 300 14 400	20 700 32 000	108 166	94.5 216	575 1 150	79.5 181	480 965	0.18 0.26	1.6
60	6×9.5×8.5	20	3 960 (3 500)	23 700 30 000	18 800 24 000	32 500 50 500	219 340	185 420	1 140 2 230	155 355	955 1 870	0.33 0.48	2.6
60	7×11×9	20	3 960 (3 500)	33 500 45 500	26 800 36 500	46 000 71 000	360 555	320 725	1 840 3 700	267 610	1 540 3 100	0.55 0.82	3.6
80	9×14×12	20	4 000 (3 500)	41 000 61 000	32 500 48 500	51 500 91 500	490 870	350 1 030	2 290 5 600	292 865	1 920 4 700	0.77 1.3	5.2
80	9×14×12	20	4 000	62 500 81 000	49 500 64 500	80 500 117 000	950 1 380	755 1 530	4 500 8 350	630 1 280	3 800 7 000	1.5 2.1	7.2
105	14×20×17	22.5	3 990	107 000 131 000	84 500 104 000	140 000 187 000	2 140 2 860	1 740 3 000	9 750 15 600	1 460 2 520	8 150 13 100	3.0 3.9	12.3
120	16×23×20	30	3 960	158 000 193 000	125 000 153 000	198 000 264 000	3 600 4 850	3 000 5 150	16 300 26 300	2 510 4 350	13 700 22 100	4.7 6.1	16.9
150	18×26×22	35	3 900	239 000 310 000	190 000 246 000	281 000 410 000	6 150 8 950	4 950 10 100	27 900 51 500	4 150 8 450	23 400 43 500	7.7 10.8	24.3

2) The basic load rating comply with the ISO standard. (ISO 14728-1, 14728-2)

C₅₀: the basic dynamic load rating for 50 km rated fatigue life C₁₀₀: the basic dynamic load rating for 100 km rated fatigue life
The basic static load rating shows static permissible load.

3) High-precision grade and medium preload of random-matching type are available for high-carbon steel products.

NH-AL (High-load type / Standard)
NH-BL (Super-high-load type / Long)

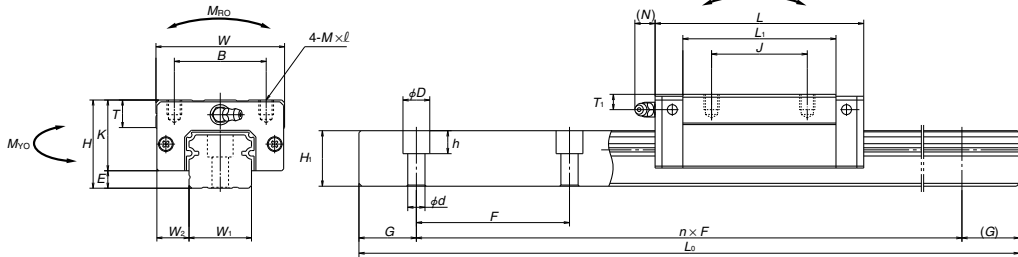
NH 30 1200 AL C 2 - PC Z**

Series name	Preload code (See page A116.)
Size	0: Z0, 1: Z1, 3: Z3, T: ZT, Z: ZZ, H: ZH
Rail length (mm)	Accuracy code (See Table 22.)
Ball slide shape code (See page A114.)	Design serial number
Material/surface treatment code (See Table 21.)	Added to the reference number.
	Number of ball slides per rail

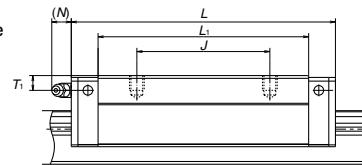
C: Special high carbon steel (NSK standard), K: Stainless steel

Front view of AL and BL types

Side view of AL type



Side view of BL type



Model No.	Assembly			Ball slide													
	Height			Width	Length	Mounting hole						Grease fitting			Width	Height	
<i>H</i>	<i>E</i>	<i>W</i> ₂	<i>W</i>	<i>L</i>	<i>B</i>	<i>J</i>	<i>M</i> × pitch × <i>ℓ</i>	<i>L</i> ₁	<i>K</i>	<i>T</i>	Hole size	<i>T</i> ₁	<i>N</i>	<i>W</i> ₁	<i>H</i> ₁		
NH25AL	36	7	12.5	48	79	35	35	M6×1×6	58	29	12	M6×0.75	6	11	23	22	
NH25BL					107		50		86								
NH30AL	42	9	16	60	85.6	40	40	M8×1.25×8	59	33	14	M6×0.75	7	11	28	26	
NH30BL					124.6		60		98								
NH35AL	48	9.5	18	70	109	50	50	M8×1.25×8	80	38.5	15	M6×0.75	8	11	34	29	
NH35BL					143		72		114								
NH45AL	60	14	20.5	86	139	60	60	M10×1.5×10	105	46	17	Rc1/8	10	13	45	38	
NH45BL					171		80		137								
NH55AL	70	15	23.5	100	163	75	75	M12×1.75×13	126	55	15	Rc1/8	11	13	53	44	
NH55BL					201		95		164								

Notes: 1) External appearance of stainless steel ball slides differs from those of carbon steel ball slides.

Reference number for ball slide of random-matching type

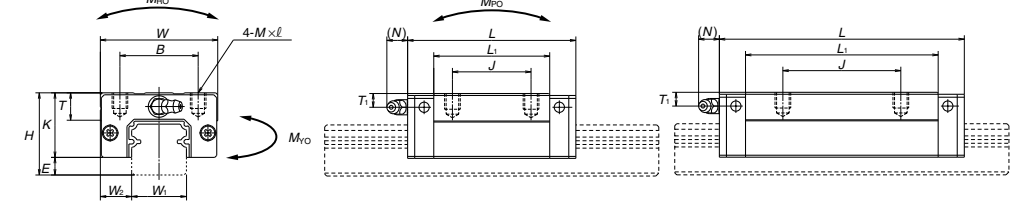
Ball slide NAH 30 AL SZ -K

Random-matching ball slide series code	Option code
NAH: NH Series random-matching ball slide	-K: Equipped with NSK K1
Size	-F: Fluoride low temperature chrome plating+AS2 grease
	-F50: Fluoride low temperature chrome plating+LG2 grease
Ball slide shape code (See page A114.)	Preload code
	No code: Fine clearance, Z: Slight preload, H: Medium preload
	Material code
	No code: Special high carbon steel (NSK standard), S: Stainless steel

AL and BL types

AL type

BL type

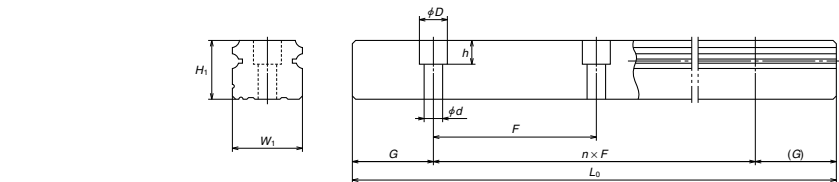


Reference number for rail of random-matching type

Rail N1H30 1200 L CN - PC Z**

Random-matching rail series code	Preload code (See page A116.)
N1H: NH Series random-matching rail	T: Fine clearance, Z: Slight preload (common rail for medium preload)
Size	Accuracy code
	PH: High precision grade, PC: Normal grade
Rail length (mm)	Design serial number
Rail shape code: L	Added to the reference number.
Material/surface treatment code (See Table 21.)	*Butting rail specification
	N: Non-butting, L: Butting specification

*Please consult with NSK for butting rail specification.



Unit: mm

Rail				Basic load rating								Weight		
Pitch	Mounting bolt hole	G	Max. length L_{onmax} () for stainless	²⁾ Dynamic		Static	Static moment (N·m)						Ball slide	Rail
F	$d \times D \times h$	(reference)		[50km] C_{50} (N)	[100km] C_{100} (N)	C_0 (N)	M_{RO}	M_{PO}		M_{VO}		(kg)		
								One slide	Two slides	One slide	Two slides			
60	7×11×9	20	3 960 (3 500)	33 500 45 500	26 800 36 500	46 000 71 000	360 555	320 725	1 840 3 700	267 610	1 540 3 100	0.46 0.69	3.6	
80	9×14×12	20	4 000 (3 500)	41 000 61 000	32 500 48 500	51 500 91 500	490 870	350 1 030	2 290 5 600	292 865	1 920 4 700	0.69 1.16	5.2	
80	9×14×12	20	4 000	62 500 81 000	49 500 64 500	80 500 117 000	950 1 380	755 1 530	4 500 8 350	630 1 280	3 800 7 000	1.2 1.7	7.2	
105	14×20×17	22.5	3 990	107 000 131 000	84 500 104 000	140 000 187 000	2 140 2 860	1 740 3 000	9 750 15 600	1 460 2 520	8 150 13 100	2.2 2.9	12.3	
120	16×23×20	30	3 960	158 000 193 000	125 000 153 000	198 000 264 000	3 600 4 850	3 000 5 150	16 300 26 300	2 510 4 350	13 700 22 100	3.7 4.7	16.9	

2) The basic load rating complies with the ISO standard. (ISO 14728-1, 14728-2)

C₅₀: the basic dynamic load rating for 50 km rated fatigue life C₁₀₀: the basic dynamic load rating for 100 km rated fatigue life The basic static load rating shows static permissible load.

3) High-precision grade and medium preload of random-matching type are available for high-carbon steel products.

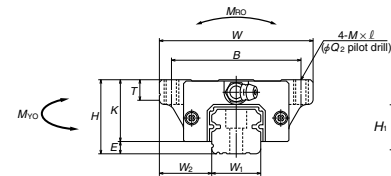
NH-EM (High-load type / Standard)
NH-GM (Super-high-load type / Long)

NH 30 1200 EM C 2 - PC Z**

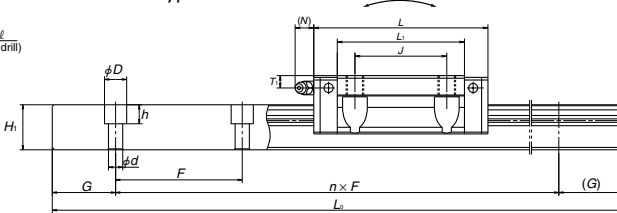
Series name	Preload code (See page A116.)
Size	0: Z0, 1: Z1, 3: Z3, T: ZT, Z: ZZ, H: ZH
Rail length (mm)	Accuracy code (See Table 22.)
Ball slide shape code (See page A114.)	Design serial number
Material/surface treatment code (See Table 21.)	Added to the reference number.
	Number of ball slides per rail

C: Special high carbon steel (NSK standard), K: Stainless steel

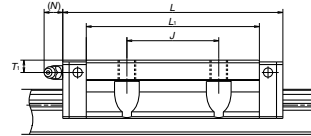
Front view of EM and GM types



Side view of EM type



Side view of GM type

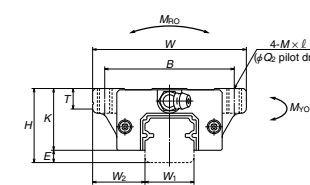


Reference number for ball slide of random-matching type

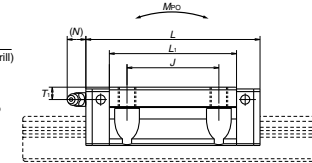
Ball slide NAH 30 EM S Z -K

Random-matching ball slide series code	Option code
NAH: NH Series random-matching ball slide	-K: Equipped with NSK K1
Size	-F: Fluoride low temperature chrome plating+AS2 grease -F50: Fluoride low temperature chrome plating+LG2 grease
Ball slide shape code (See page A114.)	Preload code
	No code: Fine clearance, Z: Slight preload, H: Medium preload
	Material code
	No code: Special high carbon steel (NSK standard), S: Stainless steel

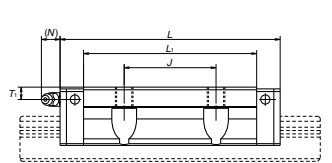
EM and GM types



EM type



GM type

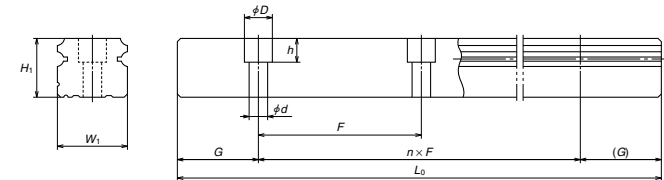


Reference number for rail of random-matching type

Rail N1H30 1200 L CN - PC Z**

Random-matching rail series code	Preload code (See page A116.)
N1H: NH Series random-matching rail	T: Fine clearance, Z: Slight preload (common rail for medium preload)
Size	Accuracy code
Rail length (mm)	PH: High precision grade PC: Normal grade
Rail shape code: L	Design serial number
Material/surface treatment code (See Table 21.)	Added to the reference number.
	*Butting rail specification
	N: Non-butting, L: Butting specification

*Please consult with NSK for butting rail specification.



Unit: mm

Model No.	Assembly			Ball slide													
	Height			Width	Length	Mounting hole							Grease fitting			Width	Height
	H	E	W ₂	W	L	B	J	M×pitch×ℓ	Q ₂	L ₁	K	T	Hole size	T ₁	N	W ₁	H ₁
NH15EM NH15GM	24	4.6	16	47	55 74	38	30	M5×0.8×7	4.4	39 58	19.4	8	ϕ 3	4.5	3.3	15	15
NH20EM NH20GM	30	5	21.5	63	69.8 91.8	53	40	M6×1×9.5	5.3	50 72	25	10	M6×0.75	5	11	20	18
NH25EM NH25GM	36	7	23.5	70	79 107	57	45	M8×1.25×10 (M8×1.25×11.5)	6.8	58 86	29	11 (12)	M6×0.75	6	11	23	22
NH30EM NH30GM	42	9	31	90	98.6 124.6	72	52	M10×1.5×12 (M10×1.5×14.5)	8.6	72 98	33	11 (15)	M6×0.75	7	11	28	26
NH35EM NH35GM	48	9.5	33	100	109 143	82	62	M10×1.5×13	8.6	80 114	38.5	12	M6×0.75	8	11	34	29
NH45EM NH45GM	60	14	37.5	120	139 171	100	80	M12×1.75×15	10.5	105 137	46	13	Rc1/8	10	13	45	38
NH55EM NH55GM	70	15	43.5	140	163 201	116	95	M14×2×18	12.5	126 164	55	15	Rc1/8	11	13	53	44
NH65EM NH65GM	90	16	53.5	170	193 253	142	110	M16×2×24	14.6	147 207	74	23	Rc1/8	19	13	63	53

Notes: 1) Parenthesized dimensions are for items made of stainless steel.

2) External appearance of stainless steel ball slides differs from those of carbon steel ball slides.

Rail				Basic load rating								Weight	
Pitch <i>F</i>	Mounting bolt hole <i>d</i> × <i>D</i> × <i>h</i>	G (reference)	Max. length <i>L</i> _{max} () for stainless	Dynamic		Static <i>C</i> ₀ (N)	<i>M</i> _{B0}	Static moment (N·m)				Ball slide (kg)	Rail (kg/m)
				[50km] <i>C</i> ₅₀ (N)	[100km] <i>C</i> ₁₀₀ (N)			<i>M</i> _{F0}		<i>M</i> _{V0}			
						One slide	Two slides	One slide	Two slides				
60	4.5×7.5×5.3	20	2 980 (1 800)	14 200 18 100	11 300 14 400	20 700 32 000	108 166	94.5 216	575 1 150	79.5 181	480 965	0.17 0.25	1.6
60	6×9.5×8.5	20	3 960 (3 500)	23 700 30 000	18 800 24 000	32 500 50 500	219 340	185 420	1 140 2 230	155 355	955 1 870	0.45 0.65	2.6
60	7×11×9	20	3 960 (3 500)	33 500 45 500	26 800 36 500	46 000 71 000	360 555	320 725	1 840 3 700	267 610	1 540 3 100	0.63 0.93	3.6
80	9×14×12	20	4 000 (3 500)	47 000 61 000	37 500 48 500	63 000 91 500	600 870	505 1 030	3 150 5 600	425 865	2 650 4 700	1.2 1.6	5.2
80	9×14×12	20	4 000	62 500 81 000	49 500 64 500	80 500 117 000	950 1 380	755 1 530	4 500 8 350	630 1 280	3 800 7 000	1.7 2.4	7.2
105	14×20×17	22.5	3 990	107 000 131 000	84 500 104 000	140 000 187 000	2 140 2 860	1 740 3 000	9 750 15 600	1 460 2 520	8 150 13 100	3 3.9	12.3
120	16×23×20	30	3 960	158 000 193 000	125 000 153 000	198 000 264 000	3 600 4 850	3 000 5 150	16 300 26 300	2 510 4 350	13 700 22 100	5 6.5	16.9
150	18×26×22	35	3 900	239 000 310 000	190 000 246 000	281 000 410 000	6 150 8 950	4 950 10 100	27 900 51 500	4 150 8 450	23 400 43 500	10 14.1	24.3

3) The basic load rating comply with the ISO standard. (ISO 14728-1, 14728-2)

C50: the basic dynamic load rating for 50 km rated fatigue life C100: the basic dynamic load rating for 100 km rated fatigue life

The basic static load rating shows static permissible load.

4) High-precision grade and medium preload of random-matching type are available for high-carbon steel products.