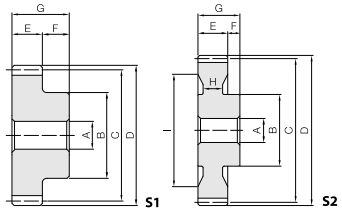
SS Module 3

Spur Gears

Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998)*
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating
Backlash	0.14 to 0.32

* The precision grade of J Series products is equivalent to the value shown in the table.



To order Hardened Plus, please specify Catalog No. + H. Example: SS3-12H

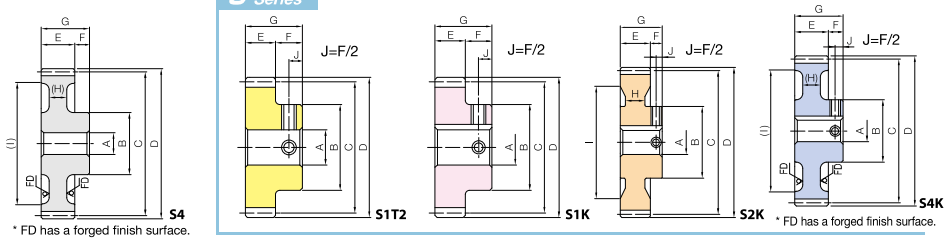
Catalog Number		No. of teeth	Shape	Bore A_{H7}	Hub dia. B	Pitch dia. C	Outside dia. D	Face width E	Hub width F	Total length G	Web thickness (H)	Web O.D. (I)	Allowable torque: Bending strength N·m	Bending strength kgf·m	Surface durability N·m	Surface durability kgf·m	Surface durability (H) N·m	Surface durability (H) kgf·m	Weight (kg)
SS3-12	H	12	S1	15	28	36	42	30	15	45	—	—	54.9	5.59	3.12	0.32	14.6	1.49	0.25
SS3-13	H	13			30	39	45						70.7	7.21	3.77	0.38	17.6	1.80	0.30
SS3-14	H	14			32	42	48						88.9	9.07	4.47	0.46	20.8	2.12	0.36
SS3-15	H	15			36	45	51						99.7	10.2	5.23	0.53	24.2	2.47	0.43
SS3-16	H	16			38	48	54						111	11.3	6.05	0.62	28.0	2.85	0.50
SS3-17	H	17			39	51	57						122	12.4	6.93	0.71	31.9	3.26	0.56
SS3-18	H	18			40	54	60						133	13.5	7.87	0.80	36.2	3.69	0.62
SS3-19	H	19			45	57	63						144	14.7	8.88	0.91	40.8	4.16	0.73
SS3-20	H	20			50	60	66						155	15.8	9.95	1.02	45.6	4.65	0.83
SS3-21	H	21			52	63	69						167	17.0	11.1	1.13	50.7	5.17	0.92
SS3-22	H	22			54	66	72						178	18.2	12.3	1.25	56.1	5.72	1.01
SS3-23	H	23			56	69	75						190	19.4	13.6	1.38	61.7	6.29	1.11
SS3-24	H	24			58	72	78						202	20.6	14.9	1.52	67.7	6.90	1.21
SS3-25	H	25		20	60	75	81						214	21.8	16.3	1.66	73.9	7.53	1.26
SS3-26	H	26			65	78	84						226	23.0	17.7	1.81	80.1	8.16	1.41
SS3-27	H	27			65	81	87						237	24.2	19.2	1.96	86.5	8.82	1.49
SS3-28	H	28			70	84	90						250	25.4	20.7	2.11	93.2	9.50	1.65
SS3-29	H	29			70	87	93						262	26.7	22.3	2.27	100	10.2	1.74
SS3-30	H	30			75	90	96						274	27.9	24.0	2.44	107	10.9	1.91
SS3-32	H	32			75	96	102						298	30.4	27.4	2.80	123	12.5	2.11
SS3-34	H	34			80	102	108						323	32.9	31.2	3.18	139	14.1	2.41
SS3-35	H	35				105	111						335	34.2	33.1	3.38	147	15.0	2.52
SS3-36	H	36				108	114						348	35.5	35.2	3.59	156	15.9	2.64
SS3-38	H	38		25		114	120						373	38.0	39.4	4.02	174	17.8	2.82
SS3-40	H	40				120	126						398	40.6	44.0	4.49	193	19.1	3.08
SS3-42	H	42			80	126	132						423	43.2	48.9	4.98	214	21.8	3.35
SS3-44	H	44				132	138						449	45.7	54.0	5.50	235	24.0	3.64
SS3-45	H	45				135	141						461	47.0	56.6	5.78	246	25.1	3.79
SS3-46	H	46				138	144						474	48.3	59.4	6.05	257	26.2	3.94
SS3-48	H	48				144	150						500	50.9	65.0	6.63	281	28.6	4.25
SS3-50	H	50	S4		80	150	156				(10)	(123)	525	53.6	70.9	7.23	305	31.1	3.72
SS3-52	H	52				156	162				16	126	551	56.2	77.1	7.86	330	33.7	4.38
SS3-54	H	54				162	168					132	577	58.8	83.6	8.52	357	36.4	4.61
SS3-55	H	55	S2			165	171					131	590	60.1	86.9	8.86	370	37.8	4.81
SS3-56	H	56				168	174					134	602	61.4	90.3	9.21	384	39.2	4.94
SS3-58	H	58			80	174	180					144	628	64.1	97.3	9.92	413	42.1	5.10
SS3-60	H	60	S4			180	186				(10)	(153)	654	66.7	105	10.7	442	45.1	4.60
SS3-62	H	62	S2			186	192				16	150	680	69.4	112	11.4	473	48.2	5.76
SS3-64	H	64				192	198					158	588	60.0	99.9	10.2	396	40.4	5.99
SS3-65	H	65				195	201					161	599	61.1	103	10.5	409	41.7	6.13
SS3-66	H	66			90	198	204					160	610	62.2	107	10.9	422	43.1	6.67
SS3-68	H	68				204	210					170	632	64.4	114	11.6	450	45.8	6.86
SS3-70	H	70				210	216					176	654	66.6	121	12.4	478	48.7	7.15
SS3-72	H	72				216	222					182	675	68.9	129	13.1	507	51.7	7.46
SS3-75	H	75				225	231					190	708	72.2	141	14.3	552	56.3	7.95
SS3-76	H	76			90	228	234					190	719	73.3	145	14.8	567	57.9	8.20
SS3-80	H	80	S4	30	90	240	246				(10)	(213)	763	77.8	162	16.5	632	64.4	6.92
SS3-90	H	90	S2		100	270	276				16	240	872	89.0	208	21.2	809	82.4	10.6
SS3-100	H	100	S4		100	300	306				(10)	(273)	983	100	261	26.6	1010	103	10.8
SS3-120	H	120			130	360	366					(333)	1200	123	386	39.4	1480	151	15.7

[Caution on Product Characteristics] ① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see Page 38 for more details.
② The backlash values shown in the table are the theoretical values for the backlash in the normal direction of a pair of identical gears in mesh.

[Caution on Secondary Operations] ① Please read "Cautions on Performing Secondary Operations" (Page 40) when performing modifications and/or secondary operations for safety concerns.
KHK Quick-Mod Gears, the KHK system for quick modification of KHK stock gears, is also available.
② Avoid performing secondary operations that narrow the tooth width, as it affects precision and strength.

[Caution on Hardened Plus] ① See Page 6 for more details on Hardened Plus.

J Series



* FD has a forged finish surface.

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To order J Series products, please specify: Catalog No. + J + BORE. Example: SS3-12J15

Bore H7	* The product shapes of J Series items are identified by background color.														
Keyway Js9	15	16	17	18	19	20	22	25	28	30	32	35	40	45	50
Screw size	5×2.3			6×2.8				8×3.3			10×3.3		12×3.3	14×3.8	
Catalog Number	M4			M5				M6			M8			M10	
SS3-12 J BORE	*S1T2														
SS3-13 J BORE	*S1T2														
SS3-14 J BORE	*S1K	S1K	S1K												
SS3-15 J BORE	*S1K	S1K	S1K	S1K	S1K										
SS3-16 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K								
SS3-17 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K								
SS3-18 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K								
SS3-19 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K							
SS3-20 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
SS3-21 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
SS3-22 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
SS3-23 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
SS3-24 J BORE	*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
SS3-25 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K			
SS3-26 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K			
SS3-27 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K			
SS3-28 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
SS3-29 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
SS3-30 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-32 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-34 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-35 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-36 J BORE						*S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-38 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-40 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-42 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-44 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-45 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-46 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-48 J BORE								*S1K	S1K	S1K	S1K	S1K	S1K	S1K	
SS3-50 J BORE								*S4K	S4K	S4K	S4K	S4K	S4K	S4K	
SS3-52 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-54 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-55 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-56 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-58 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-60 J BORE								*S4K	S4K	S4K	S4K	S4K	S4K	S4K	
SS3-62 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-64 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-65 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	
SS3-66 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	S2K
SS3-68 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	S2K
SS3-70 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	S2K
SS3-72 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	S2K
SS3-75 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	S2K
SS3-76 J BORE								*S2K	S2K	S2K	S2K	S2K	S2K	S2K	S2K
SS3-80 J BORE										*S4K	S4K	S4K	S4K	S4K	S4K
SS3-90 J BORE										*S2K	S2K	S2K	S2K	S2K	S2K
SS3-100 J BORE										*S4K	S4K	S4K	S4K	S4K	S4K
SS3-120 J BORE										*S4K	S4K	S4K	S4K	S4K	S4K

To order J Series Hardened Plus products, please specify: Catalog No. + H + J + BORE.
Example: SS3-14HJ16

[Caution on J series] ① As available-on-request products, these require a lead-time for shipping of 2 working days (excludes the day ordered) after placing an order, and 6 working days for Hardened Plus products. Because the machining starts immediately, we cannot accept cancellations. Please see Page 34 for more details.
② Number of pieces we can process for one order is 1 to 20 units. For larger quantities, please request price and delivery quotes.
③ Keyways are made according to JIS B1301 standards, Js9 tolerance.
④ Certain products which would otherwise have a very long tapped hole are counterbored to reduce the length of the tap. For details, please see the KHK Web Catalog.
⑤ Areas of products which have been re-worked will not be black oxide coated.
⑥ For products having a tapped hole, a set screw is included.
⑦ When using S1T2 set screws for fastening gears to a shaft, only use this method for applications with light load usage. For secure fastening, please use dowel pins in combination.
⑧ * is a product with the original bore diameter, so Hardened Plus is not available. See Page 6 for more details on Hardened Plus.