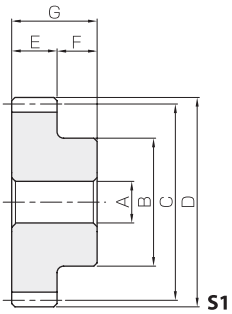
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

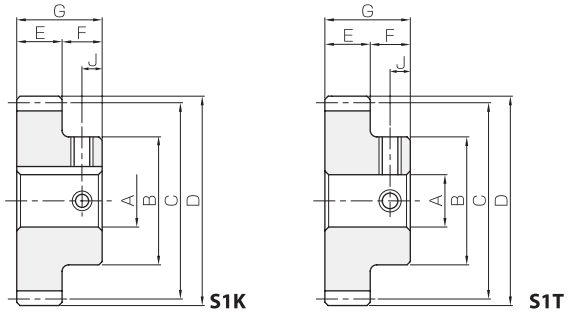


Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-12	*m*3	12	S1	15	28	36	42	30	15	45	—	—	—
●SS3-12 J15			S1T2	15									—
●SS3-12 J16			S1T2	16									—
SS3-13		13	S1	15	30	39	45	30	15	45	—	—	—
●SS3-13 J15**			S1K	15									5 x 2.3
●SS3-13 J16**			S1K	16									5 x 2.3
●SS3-13 J18			S1T2	18									—
SS3-14		14	S1	15	32	42	48	30	15	45	—	—	—
●SS3-14 J15			S1K	15									5 x 2.3
●SS3-14 J16			S1K	16									5 x 2.3
●SS3-14 J18**			S1K	18									6 x 2.8
●SS3-14 J19			S1T2	19									—
SS3-15		15	S1	15	36	45	51	30	15	45	—	—	—
●SS3-15 J15			S1K	15									5 x 2.3
●SS3-15 J16			S1K	16									5 x 2.3
●SS3-15 J18			S1K	18									6 x 2.8
●SS3-15 J19			S1K	19									6 x 2.8
●SS3-15 J20**			S1K	20									6 x 2.8
SS3-16		16	S1	15	38	48	54	30	15	45	—	—	—
●SS3-16 J15			S1K	15									5 x 2.3
●SS3-16 J16			S1K	16									5 x 2.3
●SS3-16 J18			S1K	18									6 x 2.8
●SS3-16 J19			S1K	19									6 x 2.8
●SS3-16 J20			S1K	20									6 x 2.8
●SS3-16 J22			S1K	22									6 x 2.8
SS3-17		17	S1	15	39	51	57	30	15	45	—	—	—
●SS3-17 J15			S1K	15									5 x 2.3
●SS3-17 J16			S1K	16									5 x 2.3
●SS3-17 J18			S1K	18									6 x 2.8
●SS3-17 J19			S1K	19									6 x 2.8
●SS3-17 J20			S1K	20									6 x 2.8
●SS3-17 J22			S1K	22									6 x 2.8
SS3-18		18	S1	15	40	54	60	30	15	45	—	—	—
●SS3-18 J15			S1K	15									5 x 2.3
●SS3-18 J16			S1K	16									5 x 2.3
●SS3-18 J18			S1K	18									6 x 2.8
●SS3-18 J19			S1K	19									6 x 2.8
●SS3-18 J20			S1K	20									6 x 2.8
●SS3-18 J22			S1K	22									6 x 2.8
SS3-19		19	S1	15	45	57	63	30	15	45	—	—	—
●SS3-19 J15			S1K	15									5 x 2.3
●SS3-19 J16			S1K	16									5 x 2.3
●SS3-19 J18			S1K	18									6 x 2.8
●SS3-19 J19			S1K	19									6 x 2.8
●SS3-19 J20			S1K	20									6 x 2.8
●SS3-19 J22			S1K	22									6 x 2.8
●SS3-19 J25			S1K	25									8 x 3.3

[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 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 "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's 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.

J Series RoHS





Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—						0.25	**SS3-12**
M4	7.5	54.9	3.12	5.59	0.32	0.14~0.32	0.25	●**SS3-12 J15**
M4	7.5						0.24	●**SS3-12 J16**
—	—						0.30	**SS3-13**
M4	7.5	70.7	3.77	7.21	0.38	0.14~0.32	0.30	●**SS3-13 J15****
M4	7.5						0.29	●**SS3-13 J16****
M5	7.5						0.27	●**SS3-13 J18**
—	—						0.36	**SS3-14**
M4	7.5						0.35	●**SS3-14 J15**
M4	7.5	88.9	4.47	9.07	0.46	0.14~0.32	0.35	●**SS3-14 J16**
M5	7.5						0.32	●**SS3-14 J18****
M5	7.5						0.31	●**SS3-14 J19**
—	—						0.43	**SS3-15**
M4	7.5						0.43	●**SS3-15 J15**
M4	7.5	99.7	5.23	10.2	0.53	0.14~0.32	0.42	●**SS3-15 J16**
M5	7.5						0.40	●**SS3-15 J18**
M5	7.5						0.39	●**SS3-15 J19**
M5	7.5						0.38	●**SS3-15 J20****
—	—						0.50	**SS3-16**
M4	7.5						0.49	●**SS3-16 J15**
M4	7.5						0.48	●**SS3-16 J16**
M5	7.5	111	6.05	11.3	0.62	0.14~0.32	0.46	●**SS3-16 J18**
M5	7.5						0.45	●**SS3-16 J19**
M5	7.5						0.44	●**SS3-16 J20**
M5	7.5						0.42	●**SS3-16 J22**
—	—						0.56	**SS3-17**
M4	7.5						0.55	●**SS3-17 J15**
M4	7.5						0.55	●**SS3-17 J16**
M5	7.5	122	6.93	12.4	0.71	0.14~0.32	0.52	●**SS3-17 J18**
M5	7.5						0.51	●**SS3-17 J19**
M5	7.5						0.50	●**SS3-17 J20**
M5	7.5						0.48	●**SS3-17 J22**
—	—						0.62	**SS3-18**
M4	7.5						0.62	●**SS3-18 J15**
M4	7.5						0.61	●**SS3-18 J16**
M5	7.5	133	7.87	13.5	0.80	0.14~0.32	0.59	●**SS3-18 J18**
M5	7.5						0.58	●**SS3-18 J19**
M5	7.5						0.57	●**SS3-18 J20**
M5	7.5						0.55	●**SS3-18 J22**
—	—						0.73	**SS3-19**
M4*	7.5						0.72	●**SS3-19 J15**
M4*	7.5						0.71	●**SS3-19 J16**
M5	7.5	144	8.88	14.7	0.91	0.14~0.32	0.69	●**SS3-19 J18**
M5	7.5						0.68	●**SS3-19 J19**
M5	7.5						0.67	●**SS3-19 J20**
M5	7.5						0.65	●**SS3-19 J22**
M6	7.5						0.60	●**SS3-19 J25**

[Caution on J series]

① As available-on-request products, requires a lead-time for shipping within 3 working-days (excludes the day ordered), after placing an order.
Please allow additional shipping time to get to your local distributor.
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.
③ Keyways are made according to JIS B1301 standards, Js 9 tolerance.
④ Certain products which would otherwise have a very long tapped hole are conterbored to reduce the length of the tap. (Products marked with " * " are tap size).
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 Products marked with "**" have a small amount of material between the corner of the keyway and the tooth root. This mode of failure must be considered when selecting these gears. For details, please see our web site.

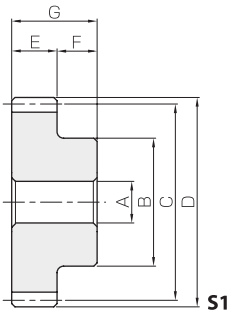
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

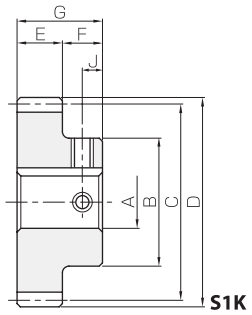


Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-20	*m*3	20	S1	15	50	60	66	30	15	45	—	—	—
●SS3-20 J15			S1K	15									5 x 2.3
●SS3-20 J16			S1K	16									5 x 2.3
●SS3-20 J18			S1K	18									6 x 2.8
●SS3-20 J19			S1K	19									6 x 2.8
●SS3-20 J20			S1K	20									6 x 2.8
●SS3-20 J22			S1K	22									6 x 2.8
●SS3-20 J25			S1K	25									8 x 3.3
●SS3-20 J28			S1K	28									8 x 3.3
●SS3-20 J30			S1K	30									8 x 3.3
SS3-21		21	S1	15	52	63	69	30	15	45	—	—	—
●SS3-21 J15			S1K	15									5 x 2.3
●SS3-21 J16			S1K	16									5 x 2.3
●SS3-21 J18			S1K	18									6 x 2.8
●SS3-21 J19			S1K	19									6 x 2.8
●SS3-21 J20			S1K	20									6 x 2.8
●SS3-21 J22			S1K	22									6 x 2.8
●SS3-21 J25			S1K	25									8 x 3.3
●SS3-21 J28			S1K	28									8 x 3.3
●SS3-21 J30			S1K	30									8 x 3.3
SS3-22		22	S1	15	54	66	72	30	15	45	—	—	—
●SS3-22 J15			S1K	15									5 x 2.3
●SS3-22 J16			S1K	16									5 x 2.3
●SS3-22 J18			S1K	18									6 x 2.8
●SS3-22 J19			S1K	19									6 x 2.8
●SS3-22 J20			S1K	20									6 x 2.8
●SS3-22 J22			S1K	22									6 x 2.8
●SS3-22 J25			S1K	25									8 x 3.3
●SS3-22 J28			S1K	28									8 x 3.3
●SS3-22 J30			S1K	30									8 x 3.3
●SS3-22 J32			S1K	32									10 x 3.3
SS3-23		23	S1	15	56	69	75	30	15	45	—	—	—
●SS3-23 J15			S1K	15									5 x 2.3
●SS3-23 J16			S1K	16									5 x 2.3
●SS3-23 J18			S1K	18									6 x 2.8
●SS3-23 J19			S1K	19									6 x 2.8
●SS3-23 J20			S1K	20									6 x 2.8
●SS3-23 J22			S1K	22									6 x 2.8
●SS3-23 J25			S1K	25									8 x 3.3
●SS3-23 J28			S1K	28									8 x 3.3
●SS3-23 J30			S1K	30									8 x 3.3
●SS3-23 J32			S1K	32									10 x 3.3
SS3-24		24	S1	15	58	72	78	30	15	45	—	—	—
●SS3-24 J15			S1K	15									5 x 2.3
●SS3-24 J16			S1K	16									5 x 2.3
●SS3-24 J18			S1K	18									6 x 2.8
●SS3-24 J19			S1K	19									6 x 2.8
●SS3-24 J20			S1K	20									6 x 2.8
●SS3-24 J22			S1K	22									6 x 2.8
●SS3-24 J25			S1K	25									8 x 3.3
●SS3-24 J28			S1K	28									8 x 3.3
●SS3-24 J30			S1K	30									8 x 3.3
●SS3-24 J32			S1K	32									10 x 3.3

[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 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]
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② Avoid performing secondary operations that narrow the tooth width as it affects precision and strength.

J Series





Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—						0.83	**SS3-20**
M4*	7.5						0.83	●**SS3-20 J15**
M4*	7.5						0.82	●**SS3-20 J16**
M5	7.5						0.80	●**SS3-20 J18**
M5	7.5	155	9.95	15.8	1.02	0.14~0.32	0.79	●**SS3-20 J19**
M5	7.5						0.78	●**SS3-20 J20**
M5	7.5						0.75	●**SS3-20 J22**
M6	7.5						0.71	●**SS3-20 J25**
M6	7.5						0.67	●**SS3-20 J28**
M6	7.5						0.64	●**SS3-20 J30**
—	—						0.92	**SS3-21**
M4*	7.5						0.91	●**SS3-21 J15**
M4*	7.5						0.90	●**SS3-21 J16**
M5	7.5						0.89	●**SS3-21 J18**
M5	7.5	167	11.1	17.0	1.13	0.18~0.38	0.87	●**SS3-21 J19**
M5	7.5						0.86	●**SS3-21 J20**
M5	7.5						0.84	●**SS3-21 J22**
M6	7.5						0.80	●**SS3-21 J25**
M6	7.5						0.75	●**SS3-21 J28**
M6	7.5						0.72	●**SS3-21 J30**
—	—						1.01	**SS3-22**
M4*	7.5						1.00	●**SS3-22 J15**
M4*	7.5						0.99	●**SS3-22 J16**
M5*	7.5						0.97	●**SS3-22 J18**
M5*	7.5						0.96	●**SS3-22 J19**
M5	7.5	178	12.3	18.2	1.25	0.18~0.38	0.96	●**SS3-22 J20**
M5	7.5						0.93	●**SS3-22 J22**
M6	7.5						0.89	●**SS3-22 J25**
M6	7.5						0.85	●**SS3-22 J28**
M6	7.5						0.81	●**SS3-22 J30**
M8	7.5						0.78	●**SS3-22 J32**
—	—						1.11	**SS3-23**
M4*	7.5						1.10	●**SS3-23 J15**
M4*	7.5						1.09	●**SS3-23 J16**
M5*	7.5						1.07	●**SS3-23 J18**
M5*	7.5						1.06	●**SS3-23 J19**
M5*	7.5	190	13.6	19.4	1.38	0.18~0.38	1.05	●**SS3-23 J20**
M5	7.5						1.03	●**SS3-23 J22**
M6	7.5						0.98	●**SS3-23 J25**
M6	7.5						0.94	●**SS3-23 J28**
M6	7.5						0.91	●**SS3-23 J30**
M8	7.5						0.87	●**SS3-23 J32**
—	—						1.21	**SS3-24**
M4*	7.5						1.20	●**SS3-24 J15**
M4*	7.5						1.19	●**SS3-24 J16**
M5*	7.5						1.17	●**SS3-24 J18**
M5*	7.5						1.16	●**SS3-24 J19**
M5*	7.5	202	14.9	20.6	1.52	0.18~0.38	1.15	●**SS3-24 J20**
M5*	7.5						1.12	●**SS3-24 J22**
M6	7.5						1.08	●**SS3-24 J25**
M6	7.5						1.04	●**SS3-24 J28**
M6	7.5						1.01	●**SS3-24 J30**
M8	7.5						0.97	●**SS3-24 J32**

[Caution on J series]

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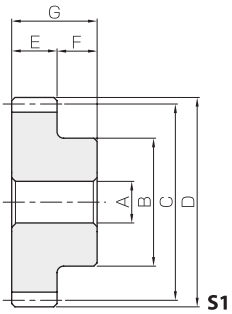
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

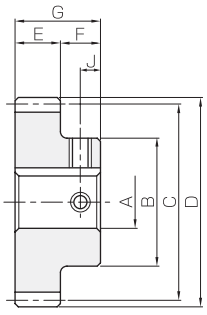


Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-25	*m*3	25	S1	20	60	75	81	30	15	45	—	—	—
●SS3-25 J20			S1K	20									6 x 2.8
●SS3-25 J22			S1K	22									6 x 2.8
●SS3-25 J25			S1K	25									8 x 3.3
●SS3-25 J28			S1K	28									8 x 3.3
●SS3-25 J30			S1K	30									8 x 3.3
●SS3-25 J32			S1K	32									10 x 3.3
●SS3-25 J35			S1K	35									10 x 3.3
SS3-26		26	S1	20	65	78	84	30	15	45	—	—	—
●SS3-26 J20			S1K	20									6 x 2.8
●SS3-26 J22			S1K	22									6 x 2.8
●SS3-26 J25			S1K	25									8 x 3.3
●SS3-26 J28			S1K	28									8 x 3.3
●SS3-26 J30			S1K	30									8 x 3.3
●SS3-26 J32			S1K	32									10 x 3.3
●SS3-26 J35			S1K	35									10 x 3.3
SS3-27		27	S1	20	65	81	87	30	15	45	—	—	—
●SS3-27 J20			S1K	20									6 x 2.8
●SS3-27 J22			S1K	22									6 x 2.8
●SS3-27 J25			S1K	25									8 x 3.3
●SS3-27 J28			S1K	28									8 x 3.3
●SS3-27 J30			S1K	30									8 x 3.3
●SS3-27 J32			S1K	32									10 x 3.3
●SS3-27 J35			S1K	35									10 x 3.3
SS3-28		28	S1	20	70	84	90	30	15	45	—	—	—
●SS3-28 J20			S1K	20									6 x 2.8
●SS3-28 J22			S1K	22									6 x 2.8
●SS3-28 J25			S1K	25									8 x 3.3
●SS3-28 J28			S1K	28									8 x 3.3
●SS3-28 J30			S1K	30									8 x 3.3
●SS3-28 J32			S1K	32									10 x 3.3
●SS3-28 J35			S1K	35									10 x 3.3
●SS3-28 J40			S1K	40									12 x 3.3
SS3-29		29	S1	20	70	87	93	30	15	45	—	—	—
●SS3-29 J20			S1K	20									6 x 2.8
●SS3-29 J22			S1K	22									6 x 2.8
●SS3-29 J25			S1K	25									8 x 3.3
●SS3-29 J28			S1K	28									8 x 3.3
●SS3-29 J30			S1K	30									8 x 3.3
●SS3-29 J32			S1K	32									10 x 3.3
●SS3-29 J35			S1K	35									10 x 3.3
●SS3-29 J40			S1K	40									12 x 3.3
SS3-30		30	S1	20	75	90	96	30	15	45	—	—	—
●SS3-30 J20			S1K	20									6 x 2.8
●SS3-30 J22			S1K	22									6 x 2.8
●SS3-30 J25			S1K	25									8 x 3.3
●SS3-30 J28			S1K	28									8 x 3.3
●SS3-30 J30			S1K	30									8 x 3.3
●SS3-30 J32			S1K	32									10 x 3.3
●SS3-30 J35			S1K	35									10 x 3.3
●SS3-30 J40			S1K	40									12 x 3.3
●SS3-30 J45			S1K	45									14 x 3.8

[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 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 "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's 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.

J Series





Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—	214	16.3	21.8	1.66	0.18~0.38	1.26	**SS3-25**
M5*	7.5						1.25	●**SS3-25 J20**
M5*	7.5						1.23	●**SS3-25 J22**
M6	7.5						1.19	●**SS3-25 J25**
M6	7.5						1.14	●**SS3-25 J28**
M6	7.5						1.11	●**SS3-25 J30**
M8	7.5						1.07	●**SS3-25 J32**
M8	7.5						1.02	●**SS3-25 J35**
—	—	226	17.7	23.0	1.81	0.18~0.38	1.41	**SS3-26**
M5*	7.5						1.39	●**SS3-26 J20**
M5*	7.5						1.37	●**SS3-26 J22**
M6	7.5						1.33	●**SS3-26 J25**
M6	7.5						1.28	●**SS3-26 J28**
M6	7.5						1.25	●**SS3-26 J30**
M8	7.5						1.21	●**SS3-26 J32**
M8	7.5						1.16	●**SS3-26 J35**
—	—	237	19.2	24.2	1.96	0.18~0.38	1.49	**SS3-27**
M5*	7.5						1.48	●**SS3-27 J20**
M5*	7.5						1.46	●**SS3-27 J22**
M6	7.5						1.42	●**SS3-27 J25**
M6	7.5						1.37	●**SS3-27 J28**
M6	7.5						1.34	●**SS3-27 J30**
M8	7.5						1.30	●**SS3-27 J32**
M8	7.5						1.25	●**SS3-27 J35**
—	—	250	20.7	25.4	2.11	0.18~0.38	1.65	**SS3-28**
M5*	7.5						1.63	●**SS3-28 J20**
M5*	7.5						1.61	●**SS3-28 J22**
M6*	7.5						1.57	●**SS3-28 J25**
M6*	7.5						1.52	●**SS3-28 J28**
M6	7.5						1.49	●**SS3-28 J30**
M8	7.5						1.45	●**SS3-28 J32**
M8	7.5						1.40	●**SS3-28 J35**
M8	7.5						1.29	●**SS3-28 J40**
—	—	262	22.3	26.7	2.27	0.18~0.38	1.74	**SS3-29**
M5*	7.5						1.73	●**SS3-29 J20**
M5*	7.5						1.70	●**SS3-29 J22**
M6*	7.5						1.66	●**SS3-29 J25**
M6*	7.5						1.62	●**SS3-29 J28**
M6	7.5						1.59	●**SS3-29 J30**
M8	7.5						1.55	●**SS3-29 J32**
M8	7.5						1.49	●**SS3-29 J35**
M8	7.5						1.39	●**SS3-29 J40**
—	—	274	24.0	27.9	2.44	0.18~0.38	1.91	**SS3-30**
M5*	7.5						1.89	●**SS3-30 J20**
M5*	7.5						1.87	●**SS3-30 J22**
M6*	7.5						1.82	●**SS3-30 J25**
M6*	7.5						1.78	●**SS3-30 J28**
M6*	7.5						1.75	●**SS3-30 J30**
M8	7.5						1.71	●**SS3-30 J32**
M8	7.5						1.66	●**SS3-30 J35**
M8	7.5						1.55	●**SS3-30 J40**
M10	7.5						1.43	●**SS3-30 J45**

[Caution on J series]

① As available-on-request products, requires a lead-time for shipping within 3 working-days (excludes the day ordered), after placing an order.
Please allow additional shipping time to get to your local distributor.
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.
③ Keyways are made according to JIS B1301 standards, Js 9 tolerance.
④ Certain products which would otherwise have a very long tapped hole are conterbored to reduce the length of the tap. (Products marked with " * " are tap size).
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.

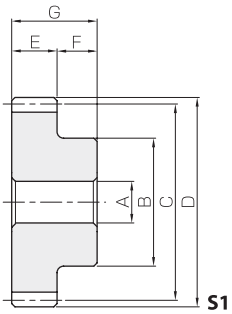
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

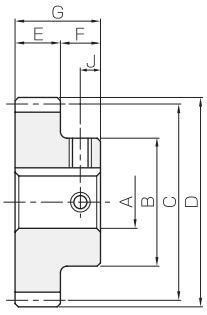


Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-32	*m*3	32	S1	20	75	96	102	30	15	45	—	—	—
●**SS3-32 J20**			S1K	20									6 x 2.8
●**SS3-32 J22**			S1K	22									6 x 2.8
●**SS3-32 J25**			S1K	25									8 x 3.3
●**SS3-32 J28**			S1K	28									8 x 3.3
●**SS3-32 J30**			S1K	30									8 x 3.3
●**SS3-32 J32**			S1K	32									10 x 3.3
●**SS3-32 J35**			S1K	35									10 x 3.3
●**SS3-32 J40**			S1K	40									12 x 3.3
●**SS3-32 J45**			S1K	45									14 x 3.8
SS3-34		34	S1	20	80	102	108	30	15	45	—	—	—
●**SS3-34 J20**			S1K	20									6 x 2.8
●**SS3-34 J22**			S1K	22									6 x 2.8
●**SS3-34 J25**			S1K	25									8 x 3.3
●**SS3-34 J28**			S1K	28									8 x 3.3
●**SS3-34 J30**			S1K	30									8 x 3.3
●**SS3-34 J32**			S1K	32									10 x 3.3
●**SS3-34 J35**			S1K	35									10 x 3.3
●**SS3-34 J40**			S1K	40									12 x 3.3
●**SS3-34 J45**			S1K	45									14 x 3.8
SS3-35		35	S1	20	80	105	111	30	15	45	—	—	—
●**SS3-35 J20**			S1K	20									6 x 2.8
●**SS3-35 J22**			S1K	22									6 x 2.8
●**SS3-35 J25**			S1K	25									8 x 3.3
●**SS3-35 J28**			S1K	28									8 x 3.3
●**SS3-35 J30**			S1K	30									8 x 3.3
●**SS3-35 J32**			S1K	32									10 x 3.3
●**SS3-35 J35**			S1K	35									10 x 3.3
●**SS3-35 J40**			S1K	40									12 x 3.3
●**SS3-35 J45**			S1K	45									14 x 3.8
SS3-36		36	S1	20	80	108	114	30	15	45	—	—	—
●**SS3-36 J20**			S1K	20									6 x 2.8
●**SS3-36 J22**			S1K	22									6 x 2.8
●**SS3-36 J25**			S1K	25									8 x 3.3
●**SS3-36 J28**			S1K	28									8 x 3.3
●**SS3-36 J30**			S1K	30									8 x 3.3
●**SS3-36 J32**			S1K	32									10 x 3.3
●**SS3-36 J35**			S1K	35									10 x 3.3
●**SS3-36 J40**			S1K	40									12 x 3.3
●**SS3-36 J45**			S1K	45									14 x 3.8
SS3-38		38	S1	25	80	114	120	30	15	45	—	—	—
●**SS3-38 J25**			S1K	25									8 x 3.3
●**SS3-38 J28**			S1K	28									8 x 3.3
●**SS3-38 J30**			S1K	30									8 x 3.3
●**SS3-38 J32**			S1K	32									10 x 3.3
●**SS3-38 J35**			S1K	35									10 x 3.3
●**SS3-38 J40**			S1K	40									12 x 3.3
●**SS3-38 J45**			S1K	45									14 x 3.8

[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 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 "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's 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.

J Series





Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—	298	27.4	30.4	2.80	0.18~0.38	2.11	**SS3-32**
M5*	7.5						2.10	●**SS3-32 J20**
M5*	7.5						2.07	●**SS3-32 J22**
M6*	7.5						2.03	●**SS3-32 J25**
M6*	7.5						1.99	●**SS3-32 J28**
M6*	7.5						1.96	●**SS3-32 J30**
M8	7.5						1.92	●**SS3-32 J32**
M8	7.5						1.86	●**SS3-32 J35**
M8	7.5						1.76	●**SS3-32 J40**
M10	7.5						1.63	●**SS3-32 J45**
—	—	323	31.2	32.9	3.18	0.18~0.38	2.41	**SS3-34**
M5*	7.5						2.38	●**SS3-34 J20**
M5*	7.5						2.36	●**SS3-34 J22**
M6*	7.5						2.32	●**SS3-34 J25**
M6*	7.5						2.28	●**SS3-34 J28**
M6*	7.5						2.25	●**SS3-34 J30**
M8	7.5						2.21	●**SS3-34 J32**
M8	7.5						2.15	●**SS3-34 J35**
M8	7.5						2.05	●**SS3-34 J40**
M10	7.5						1.92	●**SS3-34 J45**
—	—	335	33.1	34.2	3.38	0.18~0.38	2.52	**SS3-35**
M5*	7.5						2.50	●**SS3-35 J20**
M5*	7.5						2.48	●**SS3-35 J22**
M6*	7.5						2.44	●**SS3-35 J25**
M6*	7.5						2.39	●**SS3-35 J28**
M6*	7.5						2.36	●**SS3-35 J30**
M8	7.5						2.32	●**SS3-35 J32**
M8	7.5						2.27	●**SS3-35 J35**
M8	7.5						2.16	●**SS3-35 J40**
M10	7.5						2.04	●**SS3-35 J45**
—	—	348	35.2	35.5	3.59	0.18~0.38	2.64	**SS3-36**
M5*	7.5						2.62	●**SS3-36 J20**
M5*	7.5						2.60	●**SS3-36 J22**
M6*	7.5						2.55	●**SS3-36 J25**
M6*	7.5						2.51	●**SS3-36 J28**
M6*	7.5						2.48	●**SS3-36 J30**
M8	7.5						2.44	●**SS3-36 J32**
M8	7.5						2.39	●**SS3-36 J35**
M8	7.5						2.28	●**SS3-36 J40**
M10	7.5						2.16	●**SS3-36 J45**
—	—	373	39.4	38.0	4.02	0.18~0.38	2.82	**SS3-38**
M6*	7.5						2.80	●**SS3-38 J25**
M6*	7.5						2.76	●**SS3-38 J28**
M6*	7.5						2.73	●**SS3-38 J30**
M8	7.5						2.69	●**SS3-38 J32**
M8	7.5						2.63	●**SS3-38 J35**
M8	7.5						2.53	●**SS3-38 J40**
M10	7.5						2.40	●**SS3-38 J45**

[Caution on J series]

① As available-on-request products, requires a lead-time for shipping within 3 working-days (excludes the day ordered), after placing an order.
Please allow additional shipping time to get to your local distributor.
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.
③ Keyways are made according to JIS B1301 standards, Js 9 tolerance.
④ Certain products which would otherwise have a very long tapped hole are conterbored to reduce the length of the tap. (Products marked with " * " are tap size).
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.

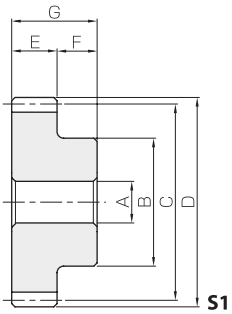
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

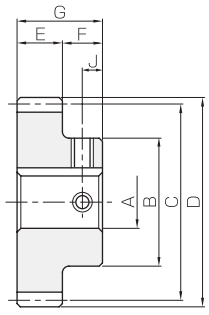


Catalog No. ●: J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-40	*m*3	40	S1	25	80	120	126	30	15	45	—	—	—
●**SS3-40 J25**			S1K	25									8 x 3.3
●**SS3-40 J28**			S1K	28									8 x 3.3
●**SS3-40 J30**			S1K	30									8 x 3.3
●**SS3-40 J32**			S1K	32									10 x 3.3
●**SS3-40 J35**			S1K	35									10 x 3.3
●**SS3-40 J40**			S1K	40									12 x 3.3
●**SS3-40 J45**			S1K	45									14 x 3.8
SS3-42		42	S1	25	80	126	132	30	15	45	—	—	—
●**SS3-42 J25**			S1K	25									8 x 3.3
●**SS3-42 J28**			S1K	28									8 x 3.3
●**SS3-42 J30**			S1K	30									8 x 3.3
●**SS3-42 J32**			S1K	32									10 x 3.3
●**SS3-42 J35**			S1K	35									10 x 3.3
●**SS3-42 J40**			S1K	40									12 x 3.3
●**SS3-42 J45**			S1K	45									14 x 3.8
SS3-44		44	S1	25	80	132	138	30	15	45	—	—	—
●**SS3-44 J25**			S1K	25									8 x 3.3
●**SS3-44 J28**			S1K	28									8 x 3.3
●**SS3-44 J30**			S1K	30									8 x 3.3
●**SS3-44 J32**			S1K	32									10 x 3.3
●**SS3-44 J35**			S1K	35									10 x 3.3
●**SS3-44 J40**			S1K	40									12 x 3.3
●**SS3-44 J45**			S1K	45									14 x 3.8
SS3-45		45	S1	25	80	135	141	30	15	45	—	—	—
●**SS3-45 J25**			S1K	25									8 x 3.3
●**SS3-45 J28**			S1K	28									8 x 3.3
●**SS3-45 J30**			S1K	30									8 x 3.3
●**SS3-45 J32**			S1K	32									10 x 3.3
●**SS3-45 J35**			S1K	35									10 x 3.3
●**SS3-45 J40**			S1K	40									12 x 3.3
●**SS3-45 J45**			S1K	45									14 x 3.8
SS3-46		46	S1	25	80	138	144	30	15	45	—	—	—
●**SS3-46 J25**			S1K	25									8 x 3.3
●**SS3-46 J28**			S1K	28									8 x 3.3
●**SS3-46 J30**			S1K	30									8 x 3.3
●**SS3-46 J32**			S1K	32									10 x 3.3
●**SS3-46 J35**			S1K	35									10 x 3.3
●**SS3-46 J40**			S1K	40									12 x 3.3
●**SS3-46 J45**			S1K	45									14 x 3.8
SS3-48		48	S1	25	80	144	150	30	15	45	—	—	—
●**SS3-48 J25**			S1K	25									8 x 3.3
●**SS3-48 J28**			S1K	28									8 x 3.3
●**SS3-48 J30**			S1K	30									8 x 3.3
●**SS3-48 J32**			S1K	32									10 x 3.3
●**SS3-48 J35**			S1K	35									10 x 3.3
●**SS3-48 J40**			S1K	40									12 x 3.3
●**SS3-48 J45**			S1K	45									14 x 3.8

[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 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 "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's 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.

J Series





Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—	398	44.0	40.6	4.49	0.18~0.38	3.08	**SS3-40**
M6*	7.5						3.06	●**SS3-40 J25**
M6*	7.5						3.02	●**SS3-40 J28**
M6*	7.5						2.98	●**SS3-40 J30**
M8	7.5						2.95	●**SS3-40 J32**
M8	7.5						2.89	●**SS3-40 J35**
M8	7.5						2.79	●**SS3-40 J40**
M10	7.5						2.66	●**SS3-40 J45**
—	—	423	48.9	43.2	4.98	0.20~0.44	3.35	**SS3-42**
M6*	7.5						3.33	●**SS3-42 J25**
M6*	7.5						3.29	●**SS3-42 J28**
M6*	7.5						3.26	●**SS3-42 J30**
M8	7.5						3.22	●**SS3-42 J32**
M8	7.5						3.16	●**SS3-42 J35**
M8	7.5						3.06	●**SS3-42 J40**
M10	7.5						2.93	●**SS3-42 J45**
—	—	449	54.0	45.7	5.50	0.20~0.44	3.64	**SS3-44**
M6*	7.5						3.62	●**SS3-44 J25**
M6*	7.5						3.58	●**SS3-44 J28**
M6*	7.5						3.54	●**SS3-44 J30**
M8	7.5						3.51	●**SS3-44 J32**
M8	7.5						3.45	●**SS3-44 J35**
M8	7.5						3.35	●**SS3-44 J40**
M10	7.5						3.22	●**SS3-44 J45**
—	—	461	56.6	47.0	5.78	0.20~0.44	3.79	**SS3-45**
M6*	7.5						3.77	●**SS3-45 J25**
M6*	7.5						3.72	●**SS3-45 J28**
M6*	7.5						3.69	●**SS3-45 J30**
M8	7.5						3.65	●**SS3-45 J32**
M8	7.5						3.60	●**SS3-45 J35**
M8	7.5						3.50	●**SS3-45 J40**
M10	7.5						3.37	●**SS3-45 J45**
—	—	474	59.4	48.3	6.05	0.20~0.44	3.94	**SS3-46**
M6*	7.5						3.92	●**SS3-46 J25**
M6*	7.5						3.88	●**SS3-46 J28**
M6*	7.5						3.84	●**SS3-46 J30**
M8	7.5						3.81	●**SS3-46 J32**
M8	7.5						3.75	●**SS3-46 J35**
M8	7.5						3.65	●**SS3-46 J40**
M10	7.5						3.52	●**SS3-46 J45**
—	—	500	65.0	50.9	6.63	0.20~0.44	4.25	**SS3-48**
M6*	7.5						4.23	●**SS3-48 J25**
M6*	7.5						4.19	●**SS3-48 J28**
M6*	7.5						4.16	●**SS3-48 J30**
M8	7.5						4.12	●**SS3-48 J32**
M8	7.5						4.06	●**SS3-48 J35**
M8	7.5						3.96	●**SS3-48 J40**
M10	7.5						3.83	●**SS3-48 J45**

[Caution on J series]

① As available-on-request products, requires a lead-time for shipping within 3 working-days (excludes the day ordered), after placing an order.
Please allow additional shipping time to get to your local distributor.
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.
③ Keyways are made according to JIS B1301 standards, Js 9 tolerance.
④ Certain products which would otherwise have a very long tapped hole are conterbored to reduce the length of the tap. (Products marked with " * " are tap size).
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.

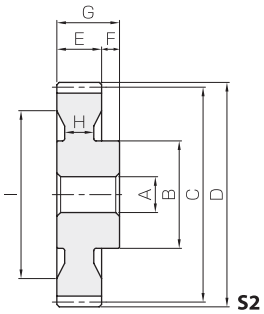
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

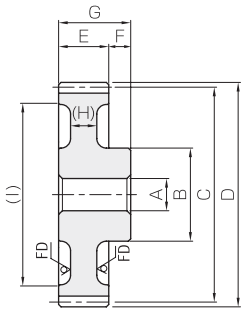
* The precision grade of J Series products is equivalent to the value shown in the table.



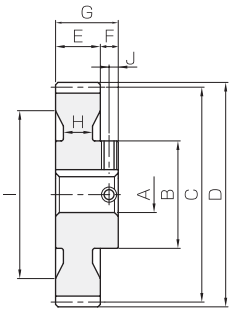
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-50	*m*3	50	S4	25	80	150	156	30	15	45	(10)	(123)	—
●**SS3-50 J25**			S4K	25									8 x 3.3
●**SS3-50 J28**			S4K	28									8 x 3.3
●**SS3-50 J30**			S4K	30									8 x 3.3
●**SS3-50 J32**			S4K	32									10 x 3.3
●**SS3-50 J35**			S4K	35									10 x 3.3
●**SS3-50 J40**			S4K	40									12 x 3.3
●**SS3-50 J45**			S4K	45									14 x 3.8
SS3-52		52	S2	25	80	156	162	30	15	45	16	126	—
●**SS3-52 J25**			S2K	25									8 x 3.3
●**SS3-52 J28**			S2K	28									8 x 3.3
●**SS3-52 J30**			S2K	30									8 x 3.3
●**SS3-52 J32**			S2K	32									10 x 3.3
●**SS3-52 J35**			S2K	35									10 x 3.3
●**SS3-52 J40**			S2K	40									12 x 3.3
●**SS3-52 J45**			S2K	45									14 x 3.8
SS3-54		54	S2	25	80	162	168	30	15	45	16	132	—
●**SS3-54 J25**			S2K	25									8 x 3.3
●**SS3-54 J28**			S2K	28									8 x 3.3
●**SS3-54 J30**			S2K	30									8 x 3.3
●**SS3-54 J32**			S2K	32									10 x 3.3
●**SS3-54 J35**			S2K	35									10 x 3.3
●**SS3-54 J40**			S2K	40									12 x 3.3
●**SS3-54 J45**			S2K	45									14 x 3.8
SS3-55		55	S2	25	80	165	171	30	15	45	16	131	—
●**SS3-55 J25**			S2K	25									8 x 3.3
●**SS3-55 J28**			S2K	28									8 x 3.3
●**SS3-55 J30**			S2K	30									8 x 3.3
●**SS3-55 J32**			S2K	32									10 x 3.3
●**SS3-55 J35**			S2K	35									10 x 3.3
●**SS3-55 J40**			S2K	40									12 x 3.3
●**SS3-55 J45**			S2K	45									14 x 3.8
SS3-56		56	S2	25	80	168	174	30	15	45	16	134	—
●**SS3-56 J25**			S2K	25									8 x 3.3
●**SS3-56 J28**			S2K	28									8 x 3.3
●**SS3-56 J30**			S2K	30									8 x 3.3
●**SS3-56 J32**			S2K	32									10 x 3.3
●**SS3-56 J35**			S2K	35									10 x 3.3
●**SS3-56 J40**			S2K	40									12 x 3.3
●**SS3-56 J45**			S2K	45									14 x 3.8
SS3-58		58	S2	25	80	174	180	30	15	45	16	144	—
●**SS3-58 J25**			S2K	25									8 x 3.3
●**SS3-58 J28**			S2K	28									8 x 3.3
●**SS3-58 J30**			S2K	30									8 x 3.3
●**SS3-58 J32**			S2K	32									10 x 3.3
●**SS3-58 J35**			S2K	35									10 x 3.3
●**SS3-58 J40**			S2K	40									12 x 3.3
●**SS3-58 J45**			S2K	45									14 x 3.8

[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 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.

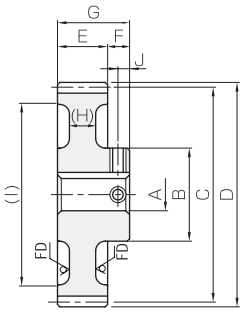
[Caution on Secondary Operations]
① Please read "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's system for quick modification of KHK stock gears is also available.
② Avoid performing secondary operations that narrow the tooth width as it affects precision and strength.



S4



S2K



S4K ＊ FD has die-forged finish.



＊ FD has die-forged finish.

Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—	525	70.9	53.6	7.23	0.20~0.44	3.72	**SS3-50**
M6*	7.5						3.70	●**SS3-50 J25**
M6*	7.5						3.65	●**SS3-50 J28**
M6*	7.5						3.62	●**SS3-50 J30**
M8	7.5						3.58	●**SS3-50 J32**
M8	7.5						3.53	●**SS3-50 J35**
M8	7.5						3.43	●**SS3-50 J40**
M10	7.5						3.30	●**SS3-50 J45**
—	—	551	77.1	56.2	7.86	0.20~0.44	4.38	**SS3-52**
M6*	7.5						4.36	●**SS3-52 J25**
M6*	7.5						4.31	●**SS3-52 J28**
M6*	7.5						4.28	●**SS3-52 J30**
M8	7.5						4.24	●**SS3-52 J32**
M8	7.5						4.19	●**SS3-52 J35**
M8	7.5						4.08	●**SS3-52 J40**
M10	7.5						3.96	●**SS3-52 J45**
—	—	577	83.6	58.8	8.52	0.20~0.44	4.61	**SS3-54**
M6*	7.5						4.59	●**SS3-54 J25**
M6*	7.5						4.55	●**SS3-54 J28**
M6*	7.5						4.52	●**SS3-54 J30**
M8	7.5						4.48	●**SS3-54 J32**
M8	7.5						4.42	●**SS3-54 J35**
M8	7.5						4.32	●**SS3-54 J40**
M10	7.5						4.19	●**SS3-54 J45**
—	—	590	86.9	60.1	8.86	0.20~0.44	4.81	**SS3-55**
M6*	7.5						4.79	●**SS3-55 J25**
M6*	7.5						4.75	●**SS3-55 J28**
M6*	7.5						4.72	●**SS3-55 J30**
M8	7.5						4.68	●**SS3-55 J32**
M8	7.5						4.62	●**SS3-55 J35**
M8	7.5						4.52	●**SS3-55 J40**
M10	7.5						4.39	●**SS3-55 J45**
—	—	602	90.3	61.4	9.21	0.20~0.44	4.94	**SS3-56**
M6*	7.5						4.91	●**SS3-56 J25**
M6*	7.5						4.87	●**SS3-56 J28**
M6*	7.5						4.84	●**SS3-56 J30**
M8	7.5						4.80	●**SS3-56 J32**
M8	7.5						4.75	●**SS3-56 J35**
M8	7.5						4.64	●**SS3-56 J40**
M10	7.5						4.52	●**SS3-56 J45**
—	—	628	97.3	64.1	9.92	0.20~0.44	5.10	**SS3-58**
M6*	7.5						5.08	●**SS3-58 J25**
M6*	7.5						5.04	●**SS3-58 J28**
M6*	7.5						5.00	●**SS3-58 J30**
M8	7.5						4.97	●**SS3-58 J32**
M8	7.5						4.91	●**SS3-58 J35**
M8	7.5						4.81	●**SS3-58 J40**
M10	7.5						4.68	●**SS3-58 J45**

[Caution on J series]

① As available-on-request products, requires a lead-time for shipping within 3 working-days (excludes the day ordered), after placing an order.
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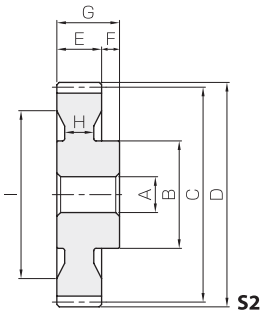
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

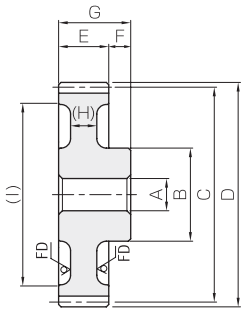


Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-60	*m*3	60	S4	25	80	180	186	30	15	45	(10)	(153)	—
●**SS3-60 J25**			S4K	25									8 x 3.3
●**SS3-60 J28**			S4K	28									8 x 3.3
●**SS3-60 J30**			S4K	30									8 x 3.3
●**SS3-60 J32**			S4K	32									10 x 3.3
●**SS3-60 J35**			S4K	35									10 x 3.3
●**SS3-60 J40**			S4K	40									12 x 3.3
●**SS3-60 J45**			S4K	45									14 x 3.8
SS3-62		62	S2	25	80	186	192	30	15	45	16	150	—
●**SS3-62 J25**			S2K	25									8 x 3.3
●**SS3-62 J28**			S2K	28									8 x 3.3
●**SS3-62 J30**			S2K	30									8 x 3.3
●**SS3-62 J32**			S2K	32									10 x 3.3
●**SS3-62 J35**			S2K	35									10 x 3.3
●**SS3-62 J40**			S2K	40									12 x 3.3
●**SS3-62 J45**			S2K	45									14 x 3.8
SS3-64		64	S2	25	80	192	198	30	15	45	16	158	—
●**SS3-64 J25**			S2K	25									8 x 3.3
●**SS3-64 J28**			S2K	28									8 x 3.3
●**SS3-64 J30**			S2K	30									8 x 3.3
●**SS3-64 J32**			S2K	32									10 x 3.3
●**SS3-64 J35**			S2K	35									10 x 3.3
●**SS3-64 J40**			S2K	40									12 x 3.3
●**SS3-64 J45**			S2K	45									14 x 3.8
SS3-65		65	S2	25	80	195	201	30	15	45	16	161	—
●**SS3-65 J25**			S2K	25									8 x 3.3
●**SS3-65 J28**			S2K	28									8 x 3.3
●**SS3-65 J30**			S2K	30									8 x 3.3
●**SS3-65 J32**			S2K	32									10 x 3.3
●**SS3-65 J35**			S2K	35									10 x 3.3
●**SS3-65 J40**			S2K	40									12 x 3.3
●**SS3-65 J45**			S2K	45									14 x 3.8
SS3-66		66	S2	25	90	198	204	30	15	45	16	160	—
●**SS3-66 J25**			S2K	25									8 x 3.3
●**SS3-66 J28**			S2K	28									8 x 3.3
●**SS3-66 J30**			S2K	30									8 x 3.3
●**SS3-66 J32**			S2K	32									10 x 3.3
●**SS3-66 J35**			S2K	35									10 x 3.3
●**SS3-66 J40**			S2K	40									12 x 3.3
●**SS3-66 J45**			S2K	45									14 x 3.8
●**SS3-66 J50**			S2K	50									14 x 3.8
SS3-68		68	S2	25	90	204	210	30	15	45	16	170	—
●**SS3-68 J25**			S2K	25									8 x 3.3
●**SS3-68 J28**			S2K	28									8 x 3.3
●**SS3-68 J30**			S2K	30									8 x 3.3
●**SS3-68 J32**			S2K	32									10 x 3.3
●**SS3-68 J35**			S2K	35									10 x 3.3
●**SS3-68 J40**			S2K	40									12 x 3.3
●**SS3-68 J45**			S2K	45									14 x 3.8
●**SS3-68 J50**			S2K	50									14 x 3.8

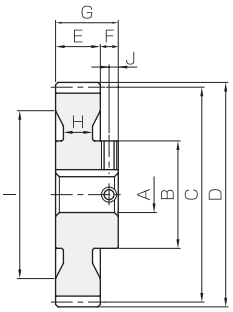
[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
② The backlash values shown in the table are the theoretical values for the backlash in the normal direction of a pair of identical gears in mesh.

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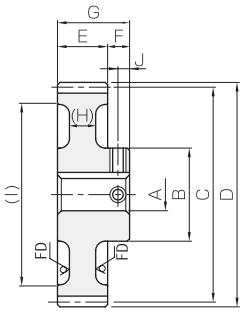
J Series



S4



S2K



S4K ＊ FD has die-forged finish.



＊ FD has die-forged finish.

Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—	654	105	66.7	10.7	0.20~0.44	4.60	**SS3-60**
M6*	7.5						4.58	●**SS3-60 J25**
M6*	7.5						4.53	●**SS3-60 J28**
M6*	7.5						4.50	●**SS3-60 J30**
M8	7.5						4.46	●**SS3-60 J32**
M8	7.5						4.41	●**SS3-60 J35**
M8	7.5						4.31	●**SS3-60 J40**
M10	7.5						4.18	●**SS3-60 J45**
—	—	680	112	69.4	11.4	0.20~0.44	5.76	**SS3-62**
M6*	7.5						5.74	●**SS3-62 J25**
M6*	7.5						5.70	●**SS3-62 J28**
M6*	7.5						5.66	●**SS3-62 J30**
M8	7.5						5.63	●**SS3-62 J32**
M8	7.5						5.57	●**SS3-62 J35**
M8	7.5						5.47	●**SS3-62 J40**
M10	7.5						5.34	●**SS3-62 J45**
—	—	588	99.9	60.0	10.2	0.20~0.44	5.99	**SS3-64**
M6*	7.5						5.96	●**SS3-64 J25**
M6*	7.5						5.92	●**SS3-64 J28**
M6*	7.5						5.89	●**SS3-64 J30**
M8	7.5						5.85	●**SS3-64 J32**
M8	7.5						5.80	●**SS3-64 J35**
M8	7.5						5.69	●**SS3-64 J40**
M10	7.5						5.57	●**SS3-64 J45**
—	—	599	103	61.1	10.5	0.20~0.44	6.13	**SS3-65**
M6*	7.5						6.10	●**SS3-65 J25**
M6*	7.5						6.06	●**SS3-65 J28**
M6*	7.5						6.03	●**SS3-65 J30**
M8	7.5						5.99	●**SS3-65 J32**
M8	7.5						5.94	●**SS3-65 J35**
M8	7.5						5.83	●**SS3-65 J40**
M10	7.5						5.71	●**SS3-65 J45**
—	—	610	107	62.2	10.9	0.20~0.44	6.67	**SS3-66**
M6*	7.5						6.65	●**SS3-66 J25**
M6*	7.5						6.60	●**SS3-66 J28**
M6*	7.5						6.57	●**SS3-66 J30**
M8*	7.5						6.53	●**SS3-66 J32**
M8*	7.5						6.48	●**SS3-66 J35**
M8	7.5						6.38	●**SS3-66 J40**
M10	7.5						6.25	●**SS3-66 J45**
M10	7.5						6.12	●**SS3-66 J50**
—	—	632	114	64.4	11.6	0.20~0.44	6.86	**SS3-68**
M6*	7.5						6.83	●**SS3-68 J25**
M6*	7.5						6.79	●**SS3-68 J28**
M6*	7.5						6.76	●**SS3-68 J30**
M8*	7.5						6.71	●**SS3-68 J32**
M8*	7.5						6.66	●**SS3-68 J35**
M8	7.5						6.56	●**SS3-68 J40**
M10	7.5						6.43	●**SS3-68 J45**
M10	7.5						6.30	●**SS3-68 J50**

[Caution on J series]

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③ Keyways are made according to JIS B1301 standards, Js 9 tolerance.
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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.

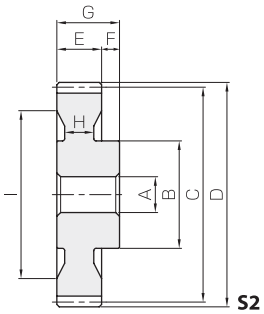
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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

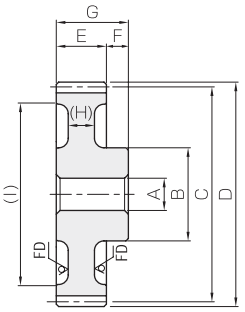


Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-70	*m*3	70	S2	25	90	210	216	30	15	45	16	176	—
●**SS3-70 J25**			S2K	25									8 x 3.3
●**SS3-70 J28**			S2K	28									8 x 3.3
●**SS3-70 J30**			S2K	30									8 x 3.3
●**SS3-70 J32**			S2K	32									10 x 3.3
●**SS3-70 J35**			S2K	35									10 x 3.3
●**SS3-70 J40**			S2K	40									12 x 3.3
●**SS3-70 J45**			S2K	45									14 x 3.8
●**SS3-70 J50**			S2K	50									14 x 3.8
SS3-72		72	S2	25	90	216	222	30	15	45	16	182	—
●**SS3-72 J25**			S2K	25									8 x 3.3
●**SS3-72 J28**			S2K	28									8 x 3.3
●**SS3-72 J30**			S2K	30									8 x 3.3
●**SS3-72 J32**			S2K	32									10 x 3.3
●**SS3-72 J35**			S2K	35									10 x 3.3
●**SS3-72 J40**			S2K	40									12 x 3.3
●**SS3-72 J45**			S2K	45									14 x 3.8
●**SS3-72 J50**			S2K	50									14 x 3.8
SS3-75		75	S2	25	90	225	231	30	15	45	16	190	—
●**SS3-75 J25**			S2K	25									8 x 3.3
●**SS3-75 J28**			S2K	28									8 x 3.3
●**SS3-75 J30**			S2K	30									8 x 3.3
●**SS3-75 J32**			S2K	32									10 x 3.3
●**SS3-75 J35**			S2K	35									10 x 3.3
●**SS3-75 J40**			S2K	40									12 x 3.3
●**SS3-75 J45**			S2K	45									14 x 3.8
●**SS3-75 J50**			S2K	50									14 x 3.8
SS3-76		76	S2	25	90	228	234	30	15	45	16	190	—
●**SS3-76 J25**			S2K	25									8 x 3.3
●**SS3-76 J28**			S2K	28									8 x 3.3
●**SS3-76 J30**			S2K	30									8 x 3.3
●**SS3-76 J32**			S2K	32									10 x 3.3
●**SS3-76 J35**			S2K	35									10 x 3.3
●**SS3-76 J40**			S2K	40									12 x 3.3
●**SS3-76 J45**			S2K	45									14 x 3.8
●**SS3-76 J50**			S2K	50									14 x 3.8
SS3-80		80	S4	30	90	240	246	30	15	45	(10)	(213)	—
●**SS3-80 J30**			S4K	30									8 x 3.3
●**SS3-80 J32**			S4K	32									10 x 3.3
●**SS3-80 J35**			S4K	35									10 x 3.3
●**SS3-80 J40**			S4K	40									12 x 3.3
●**SS3-80 J45**			S4K	45									14 x 3.8
●**SS3-80 J50**			S4K	50									14 x 3.8
SS3-90		90	S2	30	100	270	276	30	15	45	16	240	—
●**SS3-90 J30**			S2K	30									8 x 3.3
●**SS3-90 J32**			S2K	32									10 x 3.3
●**SS3-90 J35**			S2K	35									10 x 3.3
●**SS3-90 J40**			S2K	40									12 x 3.3
●**SS3-90 J45**			S2K	45									14 x 3.8
●**SS3-90 J50**			S2K	50									14 x 3.8

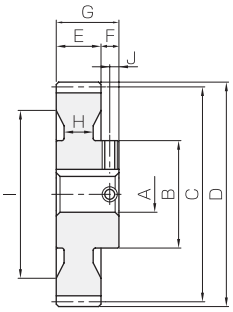
[Caution on Product Characteristics]
① The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
② The backlash values shown in the table are the theoretical values for the backlash in the normal direction of a pair of identical gears in mesh.

[Caution on Secondary Operations]
① Please read "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's 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.

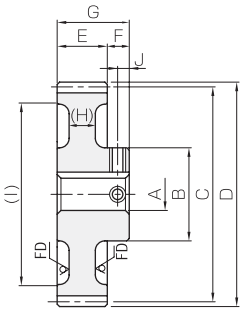
J Series RoHS



S4



S2K



S4K ✻ FD has die-forged finish.



✻ FD has die-forged finish.

Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—						7.15	**SS3-70**
M6*	7.5						7.13	●**SS3-70 J25**
M6*	7.5						7.08	●**SS3-70 J28**
M6*	7.5						7.05	●**SS3-70 J30**
M8*	7.5	654	121	66.6	12.4	0.20~0.44	7.01	●**SS3-70 J32**
M8*	7.5						6.96	●**SS3-70 J35**
M8	7.5						6.86	●**SS3-70 J40**
M10	7.5						6.73	●**SS3-70 J45**
M10	7.5						6.60	●**SS3-70 J50**
—	—						7.46	**SS3-72**
M6*	7.5						7.43	●**SS3-72 J25**
M6*	7.5						7.39	●**SS3-72 J28**
M6*	7.5						7.35	●**SS3-72 J30**
M8*	7.5	675	129	68.9	13.1	0.20~0.44	7.31	●**SS3-72 J32**
M8*	7.5						7.26	●**SS3-72 J35**
M8	7.5						7.16	●**SS3-72 J40**
M10	7.5						7.03	●**SS3-72 J45**
M10	7.5						6.90	●**SS3-72 J50**
—	—						7.95	**SS3-75**
M6*	7.5						7.92	●**SS3-75 J25**
M6*	7.5						7.88	●**SS3-75 J28**
M6*	7.5						7.85	●**SS3-75 J30**
M8*	7.5	708	141	72.2	14.3	0.20~0.44	7.81	●**SS3-75 J32**
M8*	7.5						7.75	●**SS3-75 J35**
M8	7.5						7.65	●**SS3-75 J40**
M10	7.5						7.53	●**SS3-75 J45**
M10	7.5						7.40	●**SS3-75 J50**
—	—						8.20	**SS3-76**
M6*	7.5						8.18	●**SS3-76 J25**
M6*	7.5						8.13	●**SS3-76 J28**
M6*	7.5						8.10	●**SS3-76 J30**
M8*	7.5	719	145	73.3	14.8	0.20~0.44	8.06	●**SS3-76 J32**
M8*	7.5						8.00	●**SS3-76 J35**
M8	7.5						7.91	●**SS3-76 J40**
M10	7.5						7.78	●**SS3-76 J45**
M10	7.5						7.65	●**SS3-76 J50**
—	—						6.92	**SS3-80**
M6*	7.5						6.82	●**SS3-80 J30**
M8*	7.5						6.78	●**SS3-80 J32**
M8*	7.5	763	162	77.8	16.5	0.20~0.44	6.72	●**SS3-80 J35**
M8	7.5						6.62	●**SS3-80 J40**
M10	7.5						6.49	●**SS3-80 J45**
M10	7.5						6.37	●**SS3-80 J50**
—	—						10.6	**SS3-90**
M6*	7.5						10.6	●**SS3-90 J30**
M8*	7.5						10.5	●**SS3-90 J32**
M8*	7.5	872	208	89.0	21.2	0.26~0.52	10.5	●**SS3-90 J35**
M8*	7.5						10.4	●**SS3-90 J40**
M10	7.5						10.2	●**SS3-90 J45**
M10	7.5						10.1	●**SS3-90 J50**

[Caution on J series]

① As available-on-request products, requires a lead-time for shipping within 3 working-days (excludes the day ordered), after placing an order. Please allow additional shipping time to get to your local distributor.

② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.

③ Keyways are made according to JIS B1301 standards, Js 9 tolerance.

④ Certain products which would otherwise have a very long tapped hole are conterbored to reduce the length of the tap. (Products marked with " * " are tap size).

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.

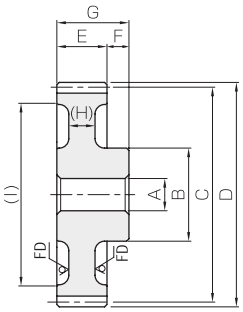
SS
Steel Spur Gears

Module 3



Specifications	
Precision grade	JIS grade N8 (JIS B1702-1: 1998) * JIS grade 4 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	less than 194HB

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



S4

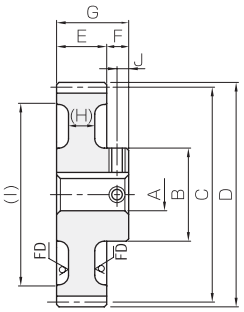
* FD has die-forged finish.

Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Web thickness	Web O.D.	Keyway
				A_{H7}	B	C	D	E	F	G	H	I	Width×Depth
SS3-100	*m*3	100	S4	30	100	300	306	30	15	45	(10)	(273)	—
●**SS3-100 J30**			S4K	30									8 x 3.3
●**SS3-100 J32**			S4K	32									10 x 3.3
●**SS3-100 J35**			S4K	35									10 x 3.3
●**SS3-100 J40**			S4K	40									12 x 3.3
●**SS3-100 J45**			S4K	45									14 x 3.8
●**SS3-100 J50**			S4K	50									14 x 3.8
SS3-120		120	S4	30	130	360	366	30	15	45	(10)	(333)	—
●**SS3-120 J30**			S4K	30									8 x 3.3
●**SS3-120 J32**			S4K	32									10 x 3.3
●**SS3-120 J35**			S4K	35									10 x 3.3
●**SS3-120 J40**			S4K	40									12 x 3.3
●**SS3-120 J45**			S4K	45									14 x 3.8
●**SS3-120 J50**			S4K	50									14 x 3.8

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J Series



S4K ＊ FD has die-forged finish.



Set Screw		Allowable torque (N·m)		Allowable torque (kgf·m)		Backlash	Weight	Catalog No.
Size	J	Bending strength	Surface durability	Bending strength	Surface durability	(mm)	(kg)	● : J Series (Available-on-request)
—	—						10.78	**SS3-100**
M6*	7.5						10.7	●**SS3-100 J30**
M8*	7.5						10.6	●**SS3-100 J32**
M8*	7.5	983	261	100	26.6	0.26~0.52	10.6	●**SS3-100 J35**
M8*	7.5						10.5	●**SS3-100 J40**
M10	7.5						10.3	●**SS3-100 J45**
M10	7.5						10.2	●**SS3-100 J50**
—	—						15.7	**SS3-120**
M6*	7.5						15.5	●**SS3-120 J30**
M8*	7.5						15.5	●**SS3-120 J32**
M8*	7.5	1200	386	123	39.4	0.26~0.52	15.4	●**SS3-120 J35**
M8*	7.5						15.3	●**SS3-120 J40**
M10*	7.5						15.2	●**SS3-120 J45**
M10*	7.5						15.1	●**SS3-120 J50**

[Caution on J series]

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Please allow additional shipping time to get to your local distributor.
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.
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