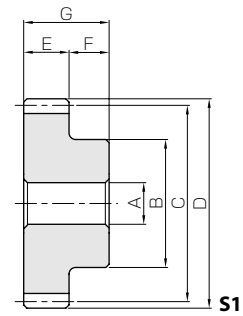




Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



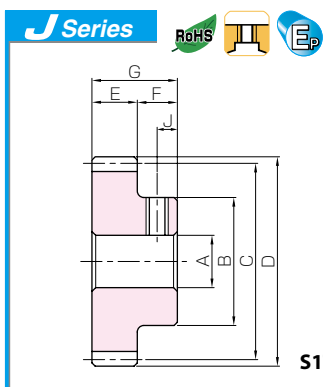
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length
				A	B	C	D	E	F	G
PS1-15 ● PS1-15J6	m1	15	S1 S1T	6 6	12	15	17	10	10	20
PS1-16 ● PS1-16J6		16	S1 S1T	6 6	12	16	18	10	10	20
PS1-18 ● PS1-18J6		18	S1 S1T	6 6	14	18	20	10	10	20
PS1-20 ● PS1-20J6		20	S1 S1T	6 6	16	20	22	10	10	20
PS1-22 ● PS1-22J8		22	S1 S1T	8 8	18	22	24	10	10	20
PS1-24 ● PS1-24J8		24	S1 S1T	8 8	20	24	26	10	10	20
PS1-25 ● PS1-25J8		25	S1 S1T	8 8	20	25	27	10	10	20
PS1-26 ● PS1-26J8		26	S1 S1T	8 8	20	26	28	10	10	20
PS1-28 ● PS1-28J8 ● PS1-28J10		28	S1 S1T S1K	8 8 10	22	28	30	10	10	20
PS1-30 ● PS1-30J8 ● PS1-30J10 ● PS1-30J12		30	S1 S1T S1K S1K	8 8 10 12	25	30	32	10	10	20
PS1-32 ● PS1-32J8 ● PS1-32J10 ● PS1-32J12		32	S1 S1T S1K S1K	8 8 10 12	26	32	34	10	10	20
PS1-35 ● PS1-35J8 ● PS1-35J10 ● PS1-35J12		35	S1 S1T S1K S1K	8 8 10 12	26	35	37	10	10	20
PS1-36 ● PS1-36J8 ● PS1-36J10 ● PS1-36J12 ● PS1-36J14 ● PS1-36J15		36	S1 S1T S1K S1K S1K S1K	8 8 10 12 14 15	28	36	38	10	10	20
PS1-40 ● PS1-40J10 ● PS1-40J12 ● PS1-40J14 ● PS1-40J15 ● PS1-40J16 ● PS1-40J18 ● PS1-40J19		40	S1 S1K S1K S1K S1K S1K S1K S1K	10 10 12 14 15 16 18 19	35	40	42	10	10	20
PS1-45 ● PS1-45J10 ● PS1-45J12 ● PS1-45J14 ● PS1-45J15 ● PS1-45J16 ● PS1-45J18 ● PS1-45J19		45	S1 S1K S1K S1K S1K S1K S1K S1K	10 10 12 14 15 16 18 19	35	45	47	10	10	20

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	0.41	0.042	0~0.32	0.0027 0.0027	PS1-15 ● PS1-15J6
—	M4**	5					
—	—	—	0.45	0.046	0~0.32	0.0030 0.0029	PS1-16 ● PS1-16J6
—	M4**	5					
—	—	—	0.53	0.054	0~0.32	0.0041 0.0040	PS1-18 ● PS1-18J6
—	M4**	5					
—	—	—	0.61	0.063	0~0.32	0.0053 0.0052	PS1-20 ● PS1-20J6
—	M4	5					
—	—	—	0.69	0.071	0~0.34	0.0062 0.0061	PS1-22 ● PS1-22J8
—	M5**	5					
—	—	—	0.77	0.079	0~0.34	0.0077 0.0076	PS1-24 ● PS1-24J8
—	M5	5					
—	—	—	0.82	0.083	0~0.34	0.0082 0.0080	PS1-25 ● PS1-25J8
—	M5	5					
—	—	—	0.86	0.088	0~0.34	0.0086 0.0085	PS1-26 ● PS1-26J8
—	M5	5					
—	—	—	0.94	0.096	0~0.34	0.010 0.010 0.0094	PS1-28 ● PS1-28J8 ● PS1-28J10
4 x 1.8	M5 M4	5 5					
—	—	—	1.03	0.10	0~0.34	0.013 0.013 0.012 0.011	PS1-30 ● PS1-30J8 ● PS1-30J10 ● PS1-30J12
4 x 1.8	M5	5					
4 x 1.8	M4	5					
—	—	—	1.11	0.11	0~0.34	0.014 0.014 0.013 0.012	PS1-32 ● PS1-32J8 ● PS1-32J10 ● PS1-32J12
4 x 1.8	M5	5					
4 x 1.8	M4	5					
—	—	—	1.25	0.13	0~0.34	0.016 0.016 0.015 0.014	PS1-35 ● PS1-35J8 ● PS1-35J10 ● PS1-35J12
4 x 1.8	M5	5					
4 x 1.8	M4	5					
—	—	—	1.30	0.13	0~0.34	0.018 0.018 0.017 0.016 0.015 0.014	PS1-36 ● PS1-36J8 ● PS1-36J10 ● PS1-36J12 ● PS1-36J14 ● PS1-36J15
4 x 1.8	M5	5					
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
—	—	—	1.48	0.15	0~0.34	0.024 0.023 0.023 0.022 0.021 0.021 0.019 0.018	PS1-40 ● PS1-40J10 ● PS1-40J12 ● PS1-40J14 ● PS1-40J15 ● PS1-40J16 ● PS1-40J18 ● PS1-40J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	1.71	0.17	0~0.34	0.028 0.027 0.026 0.025 0.025 0.024 0.023 0.022	PS1-45 ● PS1-45J10 ● PS1-45J12 ● PS1-45J14 ● PS1-45J15 ● PS1-45J16 ● PS1-45J18 ● PS1-45J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					

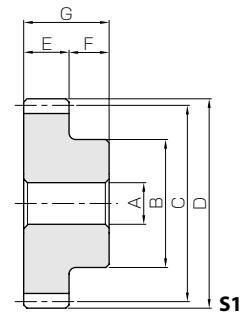
[Caution on J series]

- 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.
- 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.
- Keyways are made according to JIS B1301 standards, Js 9 tolerance.
- Certain products which would otherwise have a very long tapped hole are centerbored to reduce the length of the tap. (Products marked with "*" are tap size).
- For products having a tapped hole, a set screw is included.
- Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.

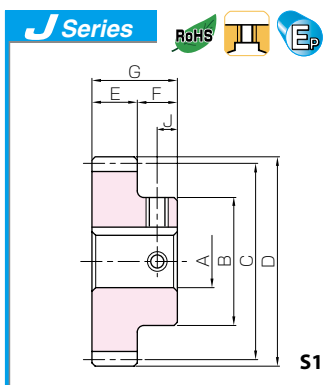


- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

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
				A	B	C	D	E	F	G
PS1-48 ● PS1-48J10 ● PS1-48J12 ● PS1-48J14 ● PS1-48J15 ● PS1-48J16 ● PS1-48J18 ● PS1-48J19	m1	48	S1	10	35	48	50	10	10	20
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			PS1-50 ● PS1-50J10 ● PS1-50J12 ● PS1-50J14 ● PS1-50J15 ● PS1-50J16 ● PS1-50J18 ● PS1-50J19	m1						
S1K	10									
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
PS1-55 ● PS1-55J10 ● PS1-55J12 ● PS1-55J14 ● PS1-55J15 ● PS1-55J16 ● PS1-55J18 ● PS1-55J19	m1	55			S1	10	35	55	57	10
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			PS1-60 ● PS1-60J10 ● PS1-60J12 ● PS1-60J14 ● PS1-60J15 ● PS1-60J16 ● PS1-60J18 ● PS1-60J19	m1	60	S1				
S1K	10									
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
PS1-65 ● PS1-65J10 ● PS1-65J12 ● PS1-65J14 ● PS1-65J15 ● PS1-65J16 ● PS1-65J18 ● PS1-65J19	m1	65				S1	10	35	65	67
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			PS1-70 ● PS1-70J10 ● PS1-70J12 ● PS1-70J14 ● PS1-70J15 ● PS1-70J16 ● PS1-70J18 ● PS1-70J19 ● PS1-70J20 ● PS1-70J22	m1	70	S1	10			
S1K	10									
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
S1K	20									
S1K	22									
PS1-75 ● PS1-75J10 ● PS1-75J12 ● PS1-75J14 ● PS1-75J15 ● PS1-75J16 ● PS1-75J18 ● PS1-75J19 ● PS1-75J20 ● PS1-75J22	m1	75	S1	10	40	75	77	10	10	20
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
S1K	22									

- [Caution on Product Characteristics]
- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
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Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N-m) Bending strength	Allowable torque (kgf-m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	1.86	0.19	0~0.34	0.030 0.030 0.029 0.028 0.027 0.027 0.025 0.025	PS1-48 ● PS1-48J10 ● PS1-48J12 ● PS1-48J14 ● PS1-48J15 ● PS1-48J16 ● PS1-48J18 ● PS1-48J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	1.96	0.20	0~0.34	0.032 0.032 0.031 0.030 0.029 0.029 0.027 0.027	PS1-50 ● PS1-50J10 ● PS1-50J12 ● PS1-50J14 ● PS1-50J15 ● PS1-50J16 ● PS1-50J18 ● PS1-50J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	2.18	0.22	0~0.36	0.037 0.036 0.036 0.035 0.034 0.034 0.032 0.031	PS1-55 ● PS1-55J10 ● PS1-55J12 ● PS1-55J14 ● PS1-55J15 ● PS1-55J16 ● PS1-55J18 ● PS1-55J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	2.41	0.25	0~0.36	0.042 0.042 0.041 0.040 0.039 0.039 0.037 0.037	PS1-60 ● PS1-60J10 ● PS1-60J12 ● PS1-60J14 ● PS1-60J15 ● PS1-60J16 ● PS1-60J18 ● PS1-60J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	2.64	0.27	0~0.36	0.048 0.047 0.047 0.046 0.045 0.044 0.043 0.042	PS1-65 ● PS1-65J10 ● PS1-65J12 ● PS1-65J14 ● PS1-65J15 ● PS1-65J16 ● PS1-65J18 ● PS1-65J19
4 x 1.8	M4	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	2.87	0.29	0~0.36	0.057 0.057 0.056 0.055 0.054 0.054 0.052 0.052 0.051 0.050	PS1-70 ● PS1-70J10 ● PS1-70J12 ● PS1-70J14 ● PS1-70J15 ● PS1-70J16 ● PS1-70J18 ● PS1-70J19 ● PS1-70J20 ● PS1-70J22
4 x 1.8	M4*	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	3.11	0.32	0~0.36	0.064 0.063 0.063 0.062 0.061 0.061 0.059 0.058 0.058 0.056	PS1-75 ● PS1-75J10 ● PS1-75J12 ● PS1-75J14 ● PS1-75J15 ● PS1-75J16 ● PS1-75J18 ● PS1-75J19 ● PS1-75J20 ● PS1-75J22
4 x 1.8	M4*	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					

[Caution on J series]

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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).

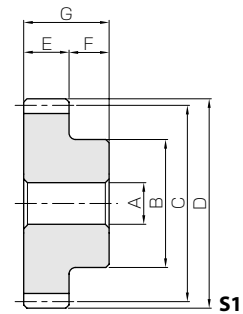
⑤ For products having a tapped hole, a set screw is included.

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Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

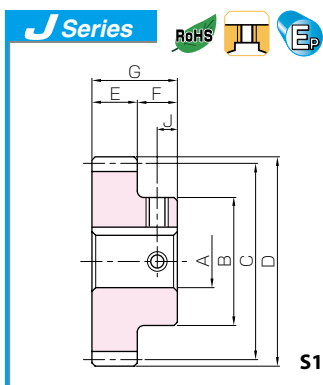
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length
				A	B	C	D	E	F	G
PS1-80 ● PS1-80J10 ● PS1-80J12 ● PS1-80J14 ● PS1-80J15 ● PS1-80J16 ● PS1-80J18 ● PS1-80J19 ● PS1-80J20 ● PS1-80J22	m1	80	S1	10	40	80	82	10	10	20
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			PS1-85 ● PS1-85J10 ● PS1-85J12 ● PS1-85J14 ● PS1-85J15 ● PS1-85J16 ● PS1-85J18 ● PS1-85J19 ● PS1-85J20 ● PS1-85J22	m1						
S1K	10									
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
S1K	20									
S1K	22									
PS1-90 ● PS1-90J10 ● PS1-90J12 ● PS1-90J14 ● PS1-90J15 ● PS1-90J16 ● PS1-90J18 ● PS1-90J19 ● PS1-90J20 ● PS1-90J22	m1	90			S1	10	40	90	92	10
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			PS1-95 ● PS1-95J10 ● PS1-95J12 ● PS1-95J14 ● PS1-95J15 ● PS1-95J16 ● PS1-95J18 ● PS1-95J19 ● PS1-95J20 ● PS1-95J22	m1	95	S1				
S1K	10									
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
S1K	20									
S1K	22									
PS1-100 ● PS1-100J10 ● PS1-100J12 ● PS1-100J14 ● PS1-100J15 ● PS1-100J16 ● PS1-100J18 ● PS1-100J19 ● PS1-100J20 ● PS1-100J22	m1	100				S1	10	40	100	102
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						

[Caution on Product Characteristics]

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- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway Width×Depth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	3.34	0.34	0~0.36	0.071 0.070 0.070 0.069 0.068 0.068 0.066 0.065 0.065 0.063	PS1-80 ●PS1-80J10 ●PS1-80J12 ●PS1-80J14 ●PS1-80J15 ●PS1-80J16 ●PS1-80J18 ●PS1-80J19 ●PS1-80J20 ●PS1-80J22
4 × 1.8	M4*	5					
4 × 1.8	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
—	—	—	3.57	0.36	0~0.36	0.079 0.078 0.077 0.076 0.076 0.075 0.074 0.073 0.072 0.071	PS1-85 ●PS1-85J10 ●PS1-85J12 ●PS1-85J14 ●PS1-85J15 ●PS1-85J16 ●PS1-85J18 ●PS1-85J19 ●PS1-85J20 ●PS1-85J22
4 × 1.8	M4*	5					
4 × 1.8	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
—	—	—	3.80	0.39	0~0.36	0.087 0.086 0.085 0.084 0.084 0.083 0.082 0.081 0.080 0.079	PS1-90 ●PS1-90J10 ●PS1-90J12 ●PS1-90J14 ●PS1-90J15 ●PS1-90J16 ●PS1-90J18 ●PS1-90J19 ●PS1-90J20 ●PS1-90J22
4 × 1.8	M4*	5					
4 × 1.8	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
—	—	—	4.03	0.41	0~0.36	0.095 0.094 0.094 0.093 0.092 0.092 0.090 0.089 0.089 0.087	PS1-95 ●PS1-95J10 ●PS1-95J12 ●PS1-95J14 ●PS1-95J15 ●PS1-95J16 ●PS1-95J18 ●PS1-95J19 ●PS1-95J20 ●PS1-95J22
4 × 1.8	M4*	5					
4 × 1.8	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
—	—	—	4.27	0.44	0~0.36	0.10 0.10 0.10 0.10 0.10 0.10 0.099 0.098 0.098 0.096	PS1-100 ●PS1-100J10 ●PS1-100J12 ●PS1-100J14 ●PS1-100J15 ●PS1-100J16 ●PS1-100J18 ●PS1-100J19 ●PS1-100J20 ●PS1-100J22
4 × 1.8	M4*	5					
4 × 1.8	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
5 × 2.3	M4	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					
6 × 2.8	M5	5					

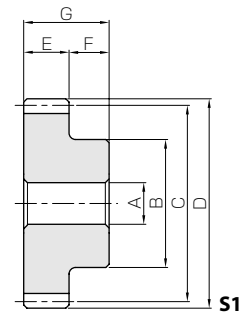
[Caution on J series]

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- 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.
- Keyways are made according to JIS B1301 standards, Js 9 tolerance.
- 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).
- For products having a tapped hole, a set screw is included.
- Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

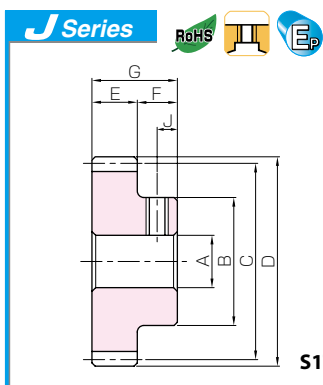
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	
				A	B	C	D	E	F	G	
PS1.5-15 ● PS1.5-15J8	m1.5	15	S1	8	18	22.5	25.5	15	10	25	
			S1T	8							
		PS1.5-16 ● PS1.5-16J8	16	S1	8	20	24	27	15	10	25
				S1T	8						
		PS1.5-18 ● PS1.5-18J8 ● PS1.5-18J10	18	S1	8	22	27	30	15	10	25
				S1T	8						
				S1K	10						
		PS1.5-20 ● PS1.5-20J8 ● PS1.5-20J10 ● PS1.5-20J12	20	S1	8	24	30	33	15	10	25
				S1T	8						
				S1K	10						
				S1K	12						
		PS1.5-22 ● PS1.5-22J8 ● PS1.5-22J10 ● PS1.5-22J12	22	S1	8	26	33	36	15	10	25
S1T	8										
S1K	10										
S1K	12										
PS1.5-24 ● PS1.5-24J8 ● PS1.5-24J10 ● PS1.5-24J12 ● PS1.5-24J14 ● PS1.5-24J15	24	S1	8	28	36	39	15	10	25		
		S1T	8								
		S1K	10								
		S1K	12								
		S1K	14								
S1K	15										
PS1.5-25 ● PS1.5-25J8 ● PS1.5-25J10 ● PS1.5-25J12 ● PS1.5-25J14 ● PS1.5-25J15 ● PS1.5-25J16	25	S1	8	30	37.5	40.5	15	10	25		
		S1T	8								
		S1K	10								
		S1K	12								
		S1K	14								
S1K	15										
S1K	16										
PS1.5-26 ● PS1.5-26J8 ● PS1.5-26J10 ● PS1.5-26J12 ● PS1.5-26J14 ● PS1.5-26J15 ● PS1.5-26J16	26	S1	8	32	39	42	15	10	25		
		S1T	8								
		S1K	10								
		S1K	12								
		S1K	14								
		S1K	15								
S1K	16										
PS1.5-28 ● PS1.5-28J8 ● PS1.5-28J10 ● PS1.5-28J12 ● PS1.5-28J14 ● PS1.5-28J15 ● PS1.5-28J16 ● PS1.5-28J18 ● PS1.5-28J19 ● PS1.5-28J20	28	S1	8	36	42	45	15	10	25		
		S1T	8								
		S1K	10								
		S1K	12								
		S1K	14								
		S1K	15								
		S1K	16								
		S1K	18								
		S1K	19								
		S1K	20								
PS1.5-30 ● PS1.5-30J8 ● PS1.5-30J10 ● PS1.5-30J12 ● PS1.5-30J14 ● PS1.5-30J15 ● PS1.5-30J16 ● PS1.5-30J18 ● PS1.5-30J19 ● PS1.5-30J20 ● PS1.5-30J22	30	S1	8	38	45	48	15	10	25		
		S1T	8								
		S1K	10								
		S1K	12								
		S1K	14								
		S1K	15								
		S1K	16								
		S1K	18								
		S1K	19								
		S1K	20								
		S1K	22								

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Plastic Spur Gears

Newly added



Keyway Width×Depth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	1.39	0.14	0~0.38	0.0084 0.0083	PS1.5-15 ● PS1.5-15J8
—	M5**	5					
—	—	—	1.53	0.16	0~0.38	0.010 0.0099	PS1.5-16 ● PS1.5-16J8
—	M5	5					
—	—	—	1.79	0.18	0~0.38	0.013 0.013 0.012	PS1.5-18 ● PS1.5-18J8 ● PS1.5-18J10
4 x 1.8	M5 M4	5 5					
—	—	—	2.07	0.21	0~0.38	0.016 0.016 0.015 0.014	PS1.5-20 ● PS1.5-20J8 ● PS1.5-20J10 ● PS1.5-20J12
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
—	—	—	2.34	0.24	0~0.38	0.020 0.019 0.018 0.017	PS1.5-22 ● PS1.5-22J8 ● PS1.5-22J10 ● PS1.5-22J12
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
—	—	—	2.61	0.27	0~0.38	0.023 0.023 0.022 0.021 0.020 0.019	PS1.5-24 ● PS1.5-24J8 ● PS1.5-24J10 ● PS1.5-24J12 ● PS1.5-24J14 ● PS1.5-24J15
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
—	—	—	2.76	0.28	0~0.38	0.026 0.026 0.025 0.024 0.022 0.022 0.021	PS1.5-25 ● PS1.5-25J8 ● PS1.5-25J10 ● PS1.5-25J12 ● PS1.5-25J14 ● PS1.5-25J15 ● PS1.5-25J16
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
—	—	—	2.91	0.3	0~0.38	0.029 0.028 0.027 0.026 0.025 0.024 0.024	PS1.5-26 ● PS1.5-26J8 ● PS1.5-26J10 ● PS1.5-26J12 ● PS1.5-26J14 ● PS1.5-26J15 ● PS1.5-26J16
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
—	—	—	3.18	0.32	0~0.38	0.034 0.034 0.033 0.032 0.031 0.030 0.029 0.028 0.027 0.026	PS1.5-28 ● PS1.5-28J8 ● PS1.5-28J10 ● PS1.5-28J12 ● PS1.5-28J14 ● PS1.5-28J15 ● PS1.5-28J16 ● PS1.5-28J18 ● PS1.5-28J19 ● PS1.5-28J20
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	3.46	0.35	0~0.38	0.039 0.039 0.038 0.037 0.036 0.035 0.034 0.033 0.032 0.031 0.029	PS1.5-30 ● PS1.5-30J8 ● PS1.5-30J10 ● PS1.5-30J12 ● PS1.5-30J14 ● PS1.5-30J15 ● PS1.5-30J16 ● PS1.5-30J18 ● PS1.5-30J19 ● PS1.5-30J20 ● PS1.5-30J22
4 x 1.8	M5 M4	5 5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
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6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					

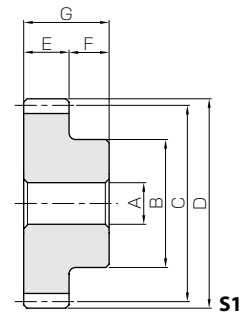
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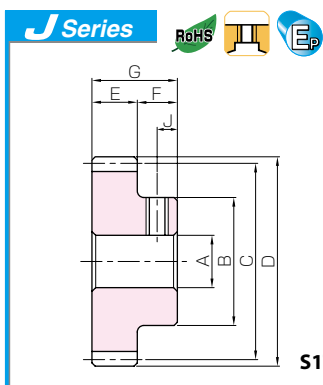
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length									
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			S1T	8															
			S1K	10															
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			PS1.5-35 ●PS1.5-35J8 ●PS1.5-35J10 ●PS1.5-35J12 ●PS1.5-35J14 ●PS1.5-35J15 ●PS1.5-35J16 ●PS1.5-35J18 ●PS1.5-35J19 ●PS1.5-35J20 ●PS1.5-35J22	m1.5							35	S1	8	42	52.5	55.5	15	10	25
												S1T	8						
S1K	10																		
S1K	12																		
S1K	14																		
S1K	15																		
S1K	16																		
S1K	18																		
S1K	19																		
S1K	20																		
PS1.5-36 ●PS1.5-36J8 ●PS1.5-36J10 ●PS1.5-36J12 ●PS1.5-36J14 ●PS1.5-36J15 ●PS1.5-36J16 ●PS1.5-36J18 ●PS1.5-36J19 ●PS1.5-36J20 ●PS1.5-36J22 ●PS1.5-36J25	m1.5	36	S1	8	45	54	57	15	10	25									
			S1T	8															
			S1K	10															
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
PS1.5-40 ●PS1.5-40J10 ●PS1.5-40J12 ●PS1.5-40J14 ●PS1.5-40J15 ●PS1.5-40J16 ●PS1.5-40J18 ●PS1.5-40J19 ●PS1.5-40J20 ●PS1.5-40J22 ●PS1.5-40J25	m1.5	40	S1	10	45	60	63	15	10	25									
			S1K	10															
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	25															
PS1.5-45 ●PS1.5-45J10 ●PS1.5-45J12 ●PS1.5-45J14 ●PS1.5-45J15 ●PS1.5-45J16 ●PS1.5-45J18 ●PS1.5-45J19 ●PS1.5-45J20 ●PS1.5-45J22 ●PS1.5-45J25	m1.5	45	S1	10	45	67.5	70.5	15	10	25									
			S1K	10															
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															

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4 x 1.8	M5	5					
4 x 1.8	M4*	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	4.22	0.43	0~0.40	0.052 0.052 0.051 0.050 0.049 0.048 0.047 0.045 0.045 0.044 0.042	PS1.5-35 ●PS1.5-35J8 ●PS1.5-35J10 ●PS1.5-35J12 ●PS1.5-35J14 ●PS1.5-35J15 ●PS1.5-35J16 ●PS1.5-35J18 ●PS1.5-35J19 ●PS1.5-35J20 ●PS1.5-35J22
4 x 1.8	M5	5					
4 x 1.8	M4*	5					
4 x 1.8	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	4.38	0.45	0~0.40	0.057 0.056 0.055 0.054 0.053 0.052 0.052 0.050 0.049 0.048 0.046 0.043	PS1.5-36 ●PS1.5-36J8 ●PS1.5-36J10 ●PS1.5-36J12 ●PS1.5-36J14 ●PS1.5-36J15 ●PS1.5-36J16 ●PS1.5-36J18 ●PS1.5-36J19 ●PS1.5-36J20 ●PS1.5-36J22 ●PS1.5-36J25
4 x 1.8	M5*	5					
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	5.00	0.51	0~0.40	0.065 0.065 0.064 0.062 0.062 0.062 0.061 0.059 0.058 0.057 0.056 0.052	PS1.5-40 ●PS1.5-40J10 ●PS1.5-40J12 ●PS1.5-40J14 ●PS1.5-40J15 ●PS1.5-40J16 ●PS1.5-40J18 ●PS1.5-40J19 ●PS1.5-40J20 ●PS1.5-40J22 ●PS1.5-40J25
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	5.79	0.59	0~0.40	0.078 0.078 0.077 0.075 0.075 0.075 0.074 0.072 0.071 0.071 0.069 0.065	PS1.5-45 ●PS1.5-45J10 ●PS1.5-45J12 ●PS1.5-45J14 ●PS1.5-45J15 ●PS1.5-45J16 ●PS1.5-45J18 ●PS1.5-45J19 ●PS1.5-45J20 ●PS1.5-45J22 ●PS1.5-45J25
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					

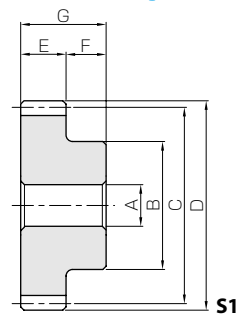
[Caution on J series]

- 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 For products having a tapped hole, a set screw is included.
- ⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "***" are the tap size), fasten with torques less than $0.12N \cdot m$ for M4, and $0.38N \cdot m$ for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

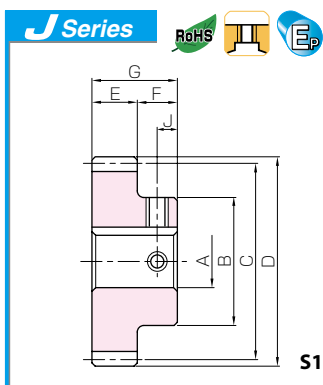
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length									
				A	B	C	D	E	F	G									
PS1.5-48 ●PS1.5-48J10 ●PS1.5-48J12 ●PS1.5-48J14 ●PS1.5-48J15 ●PS1.5-48J16 ●PS1.5-48J18 ●PS1.5-48J19 ●PS1.5-48J20 ●PS1.5-48J22 ●PS1.5-48J25	m1.5	48	S1	10	45	72	75	15	10	25									
			S1K	10															
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															
			PS1.5-50 ●PS1.5-50J10 ●PS1.5-50J12 ●PS1.5-50J14 ●PS1.5-50J15 ●PS1.5-50J16 ●PS1.5-50J18 ●PS1.5-50J19 ●PS1.5-50J20 ●PS1.5-50J22 ●PS1.5-50J25	m1.5							50	S1	10	45	75	78	15	10	25
												S1K	10						
S1K	12																		
S1K	14																		
S1K	15																		
S1K	16																		
S1K	18																		
S1K	19																		
S1K	20																		
S1K	22																		
S1K	25																		
PS1.5-55 ●PS1.5-55J10 ●PS1.5-55J12 ●PS1.5-55J14 ●PS1.5-55J15 ●PS1.5-55J16 ●PS1.5-55J18 ●PS1.5-55J19 ●PS1.5-55J20 ●PS1.5-55J22 ●PS1.5-55J25	m1.5	55			S1	10	45	82.5	85.5	15		10	25						
					S1K	10													
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															
			PS1.5-60 ●PS1.5-60J10 ●PS1.5-60J12 ●PS1.5-60J14 ●PS1.5-60J15 ●PS1.5-60J16 ●PS1.5-60J18 ●PS1.5-60J19 ●PS1.5-60J20 ●PS1.5-60J22 ●PS1.5-60J25 ●PS1.5-60J28	m1.5	60	S1					10			50	90	93	15	10	25
						S1K					10								
S1K	12																		
S1K	14																		
S1K	15																		
S1K	16																		
S1K	18																		
S1K	19																		
S1K	20																		
S1K	22																		
S1K	25																		
S1K	28																		
PS1.5-65 ●PS1.5-65J12 ●PS1.5-65J14 ●PS1.5-65J15 ●PS1.5-65J16 ●PS1.5-65J18 ●PS1.5-65J19 ●PS1.5-65J20 ●PS1.5-65J22 ●PS1.5-65J25 ●PS1.5-65J28	m1.5	65				S1	12	50	97.5	100.5	15	10	25						
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															
			S1K	28															

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N-m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	6.27	0.64	0~0.40	0.087 0.086 0.085 0.084 0.083 0.083 0.081 0.080 0.079 0.077 0.074	PS1.5-48 ●PS1.5-48J10 ●PS1.5-48J12 ●PS1.5-48J14 ●PS1.5-48J15 ●PS1.5-48J16 ●PS1.5-48J18 ●PS1.5-48J19 ●PS1.5-48J20 ●PS1.5-48J22 ●PS1.5-48J25
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
—	—	—	6.60	0.67	0~0.40	0.093 0.092 0.091 0.090 0.089 0.089 0.089 0.087 0.086 0.085 0.083 0.080	PS1.5-50 ●PS1.5-50J10 ●PS1.5-50J12 ●PS1.5-50J14 ●PS1.5-50J15 ●PS1.5-50J16 ●PS1.5-50J18 ●PS1.5-50J19 ●PS1.5-50J20 ●PS1.5-50J22 ●PS1.5-50J25
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
—	—	—	7.36	0.75	0~0.40	0.11 0.11 0.11 0.11 0.11 0.10 0.10 0.10 0.10 0.099 0.096	PS1.5-55 ●PS1.5-55J10 ●PS1.5-55J12 ●PS1.5-55J14 ●PS1.5-55J15 ●PS1.5-55J16 ●PS1.5-55J18 ●PS1.5-55J19 ●PS1.5-55J20 ●PS1.5-55J22 ●PS1.5-55J25
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
—	—	—	8.14	0.83	0~0.40	0.13 0.13 0.13 0.13 0.13 0.13 0.12 0.12 0.12 0.12 0.12 0.12	PS1.5-60 ●PS1.5-60J10 ●PS1.5-60J12 ●PS1.5-60J14 ●PS1.5-60J15 ●PS1.5-60J16 ●PS1.5-60J18 ●PS1.5-60J19 ●PS1.5-60J20 ●PS1.5-60J22 ●PS1.5-60J25 ●PS1.5-60J28
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
—	—	—	8.91	0.91	0~0.40	0.15 0.15 0.15 0.15 0.15 0.14 0.14 0.14 0.14 0.14 0.14 0.13	PS1.5-65 ●PS1.5-65J12 ●PS1.5-65J14 ●PS1.5-65J15 ●PS1.5-65J16 ●PS1.5-65J18 ●PS1.5-65J19 ●PS1.5-65J20 ●PS1.5-65J22 ●PS1.5-65J25 ●PS1.5-65J28
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					

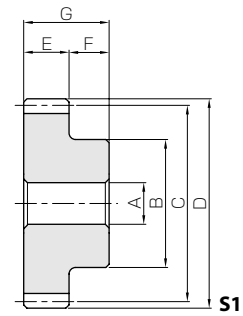
[Caution on J series]

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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.
- 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 For products having a tapped hole, a set screw is included.
- ⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

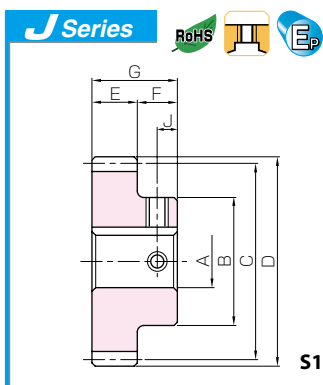
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length
				A	B	C	D	E	F	G
PS1.5-70 ● PS1.5-70J12 ● PS1.5-70J14 ● PS1.5-70J15 ● PS1.5-70J16 ● PS1.5-70J18 ● PS1.5-70J19 ● PS1.5-70J20 ● PS1.5-70J22 ● PS1.5-70J25 ● PS1.5-70J28	m1.5	70	S1	12	50	105	108	15	10	25
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			PS1.5-75 ● PS1.5-75J12 ● PS1.5-75J14 ● PS1.5-75J15 ● PS1.5-75J16 ● PS1.5-75J18 ● PS1.5-75J19 ● PS1.5-75J20 ● PS1.5-75J22 ● PS1.5-75J25 ● PS1.5-75J28	m1.5						
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
S1K	20									
S1K	22									
S1K	25									
S1K	28									
PS1.5-80 ● PS1.5-80J12 ● PS1.5-80J14 ● PS1.5-80J15 ● PS1.5-80J16 ● PS1.5-80J18 ● PS1.5-80J19 ● PS1.5-80J20 ● PS1.5-80J22 ● PS1.5-80J25 ● PS1.5-80J28 ● PS1.5-80J30	m1.5	80			S1	12	55	120	123	15
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
PS1.5-85 ● PS1.5-85J12 ● PS1.5-85J14 ● PS1.5-85J15 ● PS1.5-85J16 ● PS1.5-85J18 ● PS1.5-85J19 ● PS1.5-85J20 ● PS1.5-85J22 ● PS1.5-85J25 ● PS1.5-85J28 ● PS1.5-85J30	m1.5	85	S1	12	55	127.5	130.5	15	10	25
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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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- ② Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m)		Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J	Bending strength	Bending strength			
—	—	—	9.69	0.99	0~0.42	0.17	PS1.5-70 ● PS1.5-70J12 ● PS1.5-70J14 ● PS1.5-70J15 ● PS1.5-70J16 ● PS1.5-70J18 ● PS1.5-70J19 ● PS1.5-70J20 ● PS1.5-70J22 ● PS1.5-70J25 ● PS1.5-70J28
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
—	—	—	10.5	1.07	0~0.42	0.19	PS1.5-75 ● PS1.5-75J12 ● PS1.5-75J14 ● PS1.5-75J15 ● PS1.5-75J16 ● PS1.5-75J18 ● PS1.5-75J19 ● PS1.5-75J20 ● PS1.5-75J22 ● PS1.5-75J25 ● PS1.5-75J28
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
—	—	—	11.3	1.15	0~0.42	0.22	PS1.5-80 ● PS1.5-80J12 ● PS1.5-80J14 ● PS1.5-80J15 ● PS1.5-80J16 ● PS1.5-80J18 ● PS1.5-80J19 ● PS1.5-80J20 ● PS1.5-80J22 ● PS1.5-80J25 ● PS1.5-80J28 ● PS1.5-80J30
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
—	—	—	12.0	1.23	0~0.42	0.25	PS1.5-85 ● PS1.5-85J12 ● PS1.5-85J14 ● PS1.5-85J15 ● PS1.5-85J16 ● PS1.5-85J18 ● PS1.5-85J19 ● PS1.5-85J20 ● PS1.5-85J22 ● PS1.5-85J25 ● PS1.5-85J28 ● PS1.5-85J30
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					

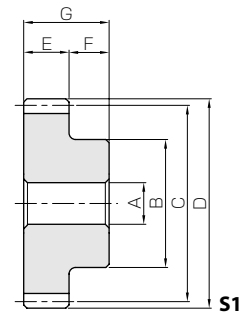
[Caution on J series]

- 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 For products having a tapped hole, a set screw is included.
- ⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.

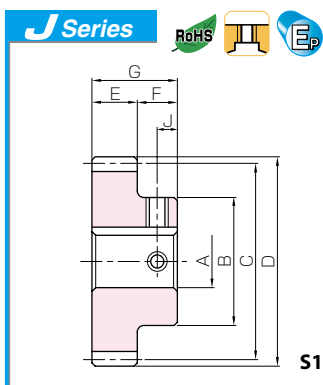


- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

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
				A	B	C	D	E	F	G
PS1.5-90 ● PS1.5-90J12 ● PS1.5-90J14 ● PS1.5-90J15 ● PS1.5-90J16 ● PS1.5-90J18 ● PS1.5-90J19 ● PS1.5-90J20 ● PS1.5-90J22 ● PS1.5-90J25 ● PS1.5-90J28 ● PS1.5-90J30	m1.5	90	S1	12	55	135	138	15	10	25
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
PS1.5-95 ● PS1.5-95J12 ● PS1.5-95J14 ● PS1.5-95J15 ● PS1.5-95J16 ● PS1.5-95J18 ● PS1.5-95J19 ● PS1.5-95J20 ● PS1.5-95J22 ● PS1.5-95J25 ● PS1.5-95J28 ● PS1.5-95J30	m1.5	95	S1	12	60	142.5	145.5	15	10	25
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
PS1.5-100 ● PS1.5-100J12 ● PS1.5-100J14 ● PS1.5-100J15 ● PS1.5-100J16 ● PS1.5-100J18 ● PS1.5-100J19 ● PS1.5-100J20 ● PS1.5-100J22 ● PS1.5-100J25 ● PS1.5-100J28 ● PS1.5-100J30	m1.5	100	S1	12	60	150	153	15	10	25
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						

- [Caution on Product Characteristics]
- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
 - ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
 - ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
 - ④ 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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- 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

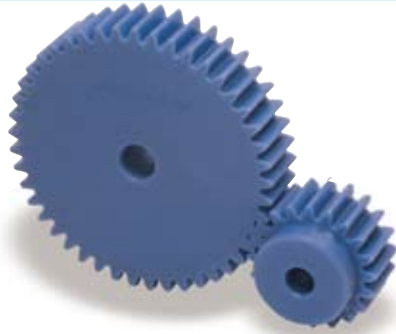
Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m)		Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J	Bending strength	Bending strength			
—	—	—	12.8	1.31	0~0.42	0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.26 0.26 0.26 0.25	PS1.5-90 ●PS1.5-90J12 ●PS1.5-90J14 ●PS1.5-90J15 ●PS1.5-90J16 ●PS1.5-90J18 ●PS1.5-90J19 ●PS1.5-90J20 ●PS1.5-90J22 ●PS1.5-90J25 ●PS1.5-90J28 ●PS1.5-90J30
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
—	—	—	13.6	1.39	0~0.42	0.31 0.31 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.29 0.29 0.29	PS1.5-95 ●PS1.5-95J12 ●PS1.5-95J14 ●PS1.5-95J15 ●PS1.5-95J16 ●PS1.5-95J18 ●PS1.5-95J19 ●PS1.5-95J20 ●PS1.5-95J22 ●PS1.5-95J25 ●PS1.5-95J28 ●PS1.5-95J30
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
—	—	—	14.4	1.47	0~0.42	0.34 0.34 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.32 0.32 0.32	PS1.5-100 ●PS1.5-100J12 ●PS1.5-100J14 ●PS1.5-100J15 ●PS1.5-100J16 ●PS1.5-100J18 ●PS1.5-100J19 ●PS1.5-100J20 ●PS1.5-100J22 ●PS1.5-100J25 ●PS1.5-100J28 ●PS1.5-100J30
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
6 x 2.8	M5*	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					

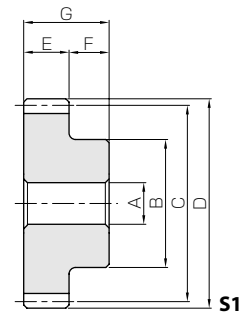
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Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

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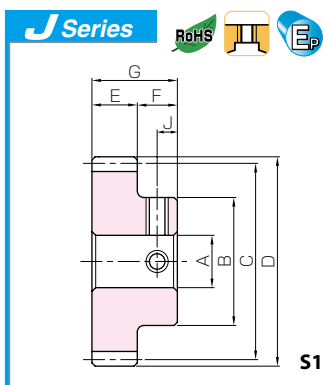


- Spur Gears
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- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

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
				A	B	C	D	E	F	G
PS2-12 ● PS2-12J10	m2	12	S1 S1T2	10 10	18	24	28	20	10	30
PS2-13 ● PS2-13J10		13	S1 S1T2	10 10	20	26	30	20	10	30
PS2-14 ● PS2-14J10		14	S1 S1T2	10 10	20	28	32	20	10	30
PS2-15 ● PS2-15J10		15	S1 S1K	10 10	24	30	34	20	10	30
PS2-16 ● PS2-16J10 ● PS2-16J12		16	S1 S1K S1K	10 10 12	26	32	36	20	10	30
PS2-18 ● PS2-18J10 ● PS2-18J12 ● PS2-18J14 ● PS2-18J15 ● PS2-18J16		18	S1 S1K S1K S1K S1K S1K	10 10 12 14 15 16	30	36	40	20	10	30
PS2-20 ● PS2-20J10 ● PS2-20J12 ● PS2-20J14 ● PS2-20J15 ● PS2-20J16		20	S1 S1K S1K S1K S1K S1K	10 10 12 14 15 16	32	40	44	20	10	30
PS2-22 ● PS2-22J10 ● PS2-22J12 ● PS2-22J14 ● PS2-22J15 ● PS2-22J16 ● PS2-22J18 ● PS2-22J19		22	S1 S1K S1K S1K S1K S1K S1K	10 10 12 14 15 16 18 19	35	44	48	20	10	30
PS2-24 ● PS2-24J10 ● PS2-24J12 ● PS2-24J14 ● PS2-24J15 ● PS2-24J16 ● PS2-24J18 ● PS2-24J19 ● PS2-24J20 ● PS2-24J22		24	S1 S1K S1K S1K S1K S1K S1K S1K S1K	10 10 12 14 15 16 18 19 20 22	38	48	52	20	10	30
PS2-25 ● PS2-25J10 ● PS2-25J12 ● PS2-25J14 ● PS2-25J15 ● PS2-25J16 ● PS2-25J18 ● PS2-25J19 ● PS2-25J20 ● PS2-25J22		25	S1 S1K S1K S1K S1K S1K S1K S1K S1K S1K	10 10 12 14 15 16 18 19 20 22	40	50	54	20	10	30

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Plastic Spur Gears

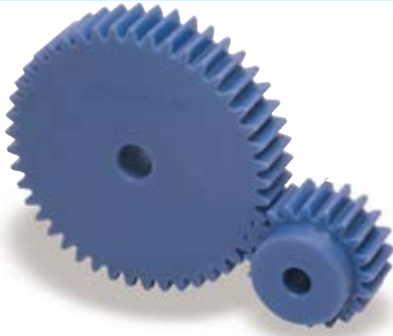
Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	2.25	0.23	0~0.42	0.011 0.011	PS2-12 ● PS2-12J10
—	M4**	5					
—	—	—	2.59	0.26	0~0.42	0.013 0.013	PS2-13 ● PS2-13J10
—	M4	5					
—	—	—	2.96	0.30	0~0.42	0.015 0.015	PS2-14 ● PS2-14J10
—	M4	5					
4 x 1.8	—	—	3.29	0.34	0~0.42	0.019 0.018	PS2-15 ● PS2-15J10
4 x 1.8	M4	5					
4 x 1.8 4 x 1.8	M4 M4	5 5	3.63	0.37	0~0.42	0.022 0.022 0.020	PS2-16 ● PS2-16J10 ● PS2-16J12
—	—	—					
4 x 1.8 4 x 1.8 5 x 2.3 5 x 2.3 5 x 2.3	M4 M4 M4 M4 M4	5 5 5 5 5	4.24	0.43	0~0.42	0.029 0.029 0.027 0.026 0.025 0.024	PS2-18 ● PS2-18J10 ● PS2-18J12 ● PS2-18J14 ● PS2-18J15 ● PS2-18J16
—	—	—					
4 x 1.8 4 x 1.8 5 x 2.3 5 x 2.3 5 x 2.3	M4 M4 M4 M4 M4	5 5 5 5 5	4.91	0.50	0~0.42	0.036 0.035 0.034 0.032 0.032 0.031	PS2-20 ● PS2-20J10 ● PS2-20J12 ● PS2-20J14 ● PS2-20J15 ● PS2-20J16
—	—	—					
4 x 1.8 4 x 1.8 5 x 2.3 5 x 2.3 5 x 2.3 6 x 2.8 6 x 2.8	M4 M4 M4 M4 M4 M5 M5	5 5 5 5 5 5 5	5.55	0.57	0~0.42	0.044 0.043 0.042 0.040 0.040 0.039 0.037 0.036	PS2-22 ● PS2-22J10 ● PS2-22J12 ● PS2-22J14 ● PS2-22J15 ● PS2-22J16 ● PS2-22J18 ● PS2-22J19
—	—	—					
4 x 1.8 4 x 1.8 5 x 2.3 5 x 2.3 5 x 2.3 6 x 2.8 6 x 2.8 6 x 2.8 6 x 2.8	M4 M4 M4 M4 M4 M5 M5 M5 M5	5 5 5 5 5 5 5 5 5	6.19	0.63	0~0.42	0.052 0.052 0.051 0.049 0.048 0.047 0.045 0.044 0.043 0.041	PS2-24 ● PS2-24J10 ● PS2-24J12 ● PS2-24J14 ● PS2-24J15 ● PS2-24J16 ● PS2-24J18 ● PS2-24J19 ● PS2-24J20 ● PS2-24J22
—	—	—					
4 x 1.8 4 x 1.8 5 x 2.3 5 x 2.3 5 x 2.3 6 x 2.8 6 x 2.8 6 x 2.8 6 x 2.8	M4* M4 M4 M4 M4 M5 M5 M5 M5	5 5 5 5 5 5 5 5 5	6.54	0.67	0~0.42	0.057 0.057 0.056 0.054 0.053 0.052 0.050 0.049 0.048 0.046	PS2-25 ● PS2-25J10 ● PS2-25J12 ● PS2-25J14 ● PS2-25J15 ● PS2-25J16 ● PS2-25J18 ● PS2-25J19 ● PS2-25J20 ● PS2-25J22

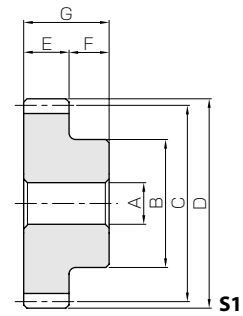
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Specifications	
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Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

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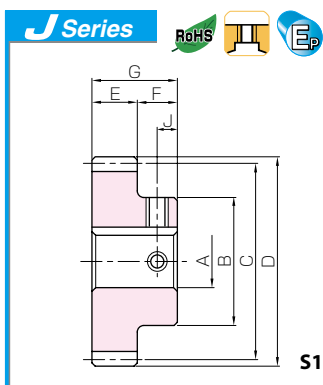
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length
				A	B	C	D	E	F	G
PS2-26 ● PS2-26J10 ● PS2-26J12 ● PS2-26J14 ● PS2-26J15 ● PS2-26J16 ● PS2-26J18 ● PS2-26J19 ● PS2-26J20 ● PS2-26J22	m2	26	S1	10	42	52	56	20	10	30
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			PS2-28 ● PS2-28J10 ● PS2-28J12 ● PS2-28J14 ● PS2-28J15 ● PS2-28J16 ● PS2-28J18 ● PS2-28J19 ● PS2-28J20 ● PS2-28J22 ● PS2-28J25	m2						
S1K	10									
S1K	12									
S1K	14									
S1K	15									
S1K	16									
S1K	18									
S1K	19									
S1K	20									
S1K	22									
S1K	25									
PS2-30 ● PS2-30J10 ● PS2-30J12 ● PS2-30J14 ● PS2-30J15 ● PS2-30J16 ● PS2-30J18 ● PS2-30J19 ● PS2-30J20 ● PS2-30J22 ● PS2-30J25 ● PS2-30J28	m2	30	S1	10	50	60	64	20	10	30
			S1K	10						
			S1K	12						
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
S1K	28									

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Plastic Spur Gears

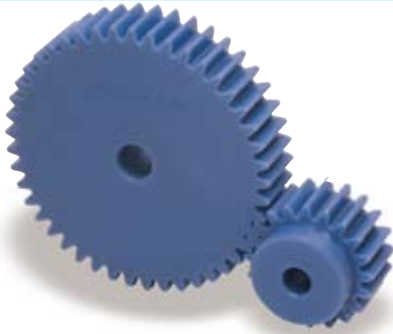
Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	6.90	0.70	0~0.44	0.063 0.062 0.061 0.059 0.058 0.058 0.055 0.054 0.053 0.051	PS2-26 ● PS2-26J10 ● PS2-26J12 ● PS2-26J14 ● PS2-26J15 ● PS2-26J16 ● PS2-26J18 ● PS2-26J19 ● PS2-26J20 ● PS2-26J22
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
5 x 2.3	M4	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
—	—	—	7.54	0.77	0~0.44	0.073 0.072 0.071 0.069 0.069 0.068 0.066 0.065 0.064 0.061 0.057	PS2-28 ● PS2-28J10 ● PS2-28J12 ● PS2-28J14 ● PS2-28J15 ● PS2-28J16 ● PS2-28J18 ● PS2-28J19 ● PS2-28J20 ● PS2-28J22 ● PS2-28J25
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
—	—	—	8.20	0.84	0~0.44	0.086 0.085 0.084 0.082 0.081 0.080 0.078 0.077 0.076 0.074 0.070 0.065	PS2-30 ● PS2-30J10 ● PS2-30J12 ● PS2-30J14 ● PS2-30J15 ● PS2-30J16 ● PS2-30J18 ● PS2-30J19 ● PS2-30J20 ● PS2-30J22 ● PS2-30J25 ● PS2-30J28
4 x 1.8	M4*	5					
4 x 1.8	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
5 x 2.3	M4*	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
6 x 2.8	M5	5					
8 x 3.3	M6	5					
8 x 3.3	M6	5					

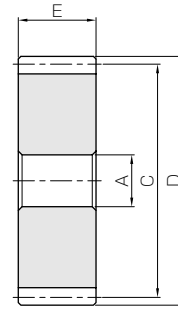
[Caution on J series]

- 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 conerbored to reduce the length of the tap. (Products marked with "*" are tap size).
- ⑤ For products having a tapped hole, a set screw is included.
- ⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

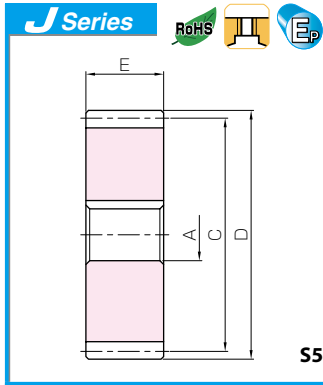
Catalog No. ● J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA2-32 ● PSA2-32 J12 ● PSA2-32 J14 ● PSA2-32 J15 ● PSA2-32 J16 ● PSA2-32 J18 ● PSA2-32 J19 ● PSA2-32 J20 ● PSA2-32 J22 ● PSA2-32 J25 ● PSA2-32 J28	m2	32	S5	12	64	68	20	—
			S5K	12				4 x 1.8
			S5K	14				5 x 2.3
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	28				8 x 3.3
PSA2-35 ● PSA2-35 J12 ● PSA2-35 J14 ● PSA2-35 J15 ● PSA2-35 J16 ● PSA2-35 J18 ● PSA2-35 J19 ● PSA2-35 J20 ● PSA2-35 J22 ● PSA2-35 J25 ● PSA2-35 J28 ● PSA2-35 J30 ● PSA2-35 J32	m2	35	S5	12	70	74	20	—
			S5K	12				4 x 1.8
			S5K	14				5 x 2.3
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
S5K	32	10 x 3.3						
PSA2-36 ● PSA2-36 J12 ● PSA2-36 J14 ● PSA2-36 J15 ● PSA2-36 J16 ● PSA2-36 J18 ● PSA2-36 J19 ● PSA2-36 J20 ● PSA2-36 J22 ● PSA2-36 J25 ● PSA2-36 J28 ● PSA2-36 J30 ● PSA2-36 J32	m2	36	S5	12	72	76	20	—
			S5K	12				4 x 1.8
			S5K	14				5 x 2.3
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
S5K	32	10 x 3.3						
PSA2-40 ● PSA2-40 J12 ● PSA2-40 J14 ● PSA2-40 J15 ● PSA2-40 J16 ● PSA2-40 J18 ● PSA2-40 J19 ● PSA2-40 J20 ● PSA2-40 J22 ● PSA2-40 J25 ● PSA2-40 J28 ● PSA2-40 J30 ● PSA2-40 J32 ● PSA2-40 J35	m2	40	S5	12	80	84	20	—
			S5K	12				4 x 1.8
			S5K	14				5 x 2.3
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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.

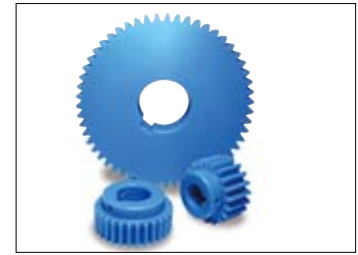
[Caution on Secondary Operations]

- 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



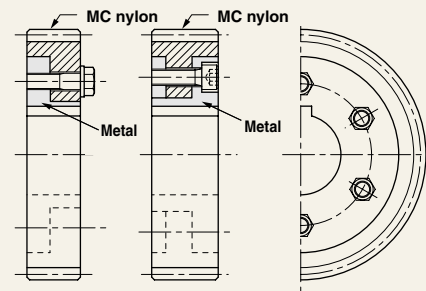
Allowable torque (N-m) Bending strength	Allowable torque (kgf-m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
8.91	0.91	0~0.44	0.075	PSA2-32 ● PSA2-32 J12 ● PSA2-32 J14 ● PSA2-32 J15 ● PSA2-32 J16 ● PSA2-32 J18 ● PSA2-32 J19 ● PSA2-32 J20 ● PSA2-32 J22 ● PSA2-32 J25 ● PSA2-32 J28 ● PSA2-32 J32
			0.074	
			0.073	
			0.072	
			0.071	
			0.070	
			0.070	
			0.068	
			0.065	
			0.062	
			0.062	
			0.062	
10.0	1.02	0~0.44	0.089	PSA2-35 ● PSA2-35 J12 ● PSA2-35 J14 ● PSA2-35 J15 ● PSA2-35 J16 ● PSA2-35 J18 ● PSA2-35 J19 ● PSA2-35 J20 ● PSA2-35 J22 ● PSA2-35 J25 ● PSA2-35 J28 ● PSA2-35 J30 ● PSA2-35 J32
			0.089	
			0.088	
			0.088	
			0.087	
			0.086	
			0.085	
			0.084	
			0.083	
			0.080	
			0.077	
			0.075	
0.072				
10.4	1.06	0~0.44	0.094	PSA2-36 ● PSA2-36 J12 ● PSA2-36 J14 ● PSA2-36 J15 ● PSA2-36 J16 ● PSA2-36 J18 ● PSA2-36 J19 ● PSA2-36 J20 ● PSA2-36 J22 ● PSA2-36 J25 ● PSA2-36 J28 ● PSA2-36 J30 ● PSA2-36 J32
			0.094	
			0.093	
			0.093	
			0.092	
			0.091	
			0.090	
			0.089	
			0.088	
			0.088	
			0.085	
			0.082	
0.080				
0.078				
11.9	1.21	0~0.44	0.12	PSA2-40 ● PSA2-40 J12 ● PSA2-40 J14 ● PSA2-40 J15 ● PSA2-40 J16 ● PSA2-40 J18 ● PSA2-40 J19 ● PSA2-40 J20 ● PSA2-40 J22 ● PSA2-40 J25 ● PSA2-40 J28 ● PSA2-40 J30 ● PSA2-40 J32 ● PSA2-40 J35
			0.12	
			0.12	
			0.11	
			0.11	
			0.11	
			0.11	
			0.11	
			0.11	
			0.11	
			0.11	
			0.11	
0.10				
0.10				
0.10				
0.10				

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

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

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

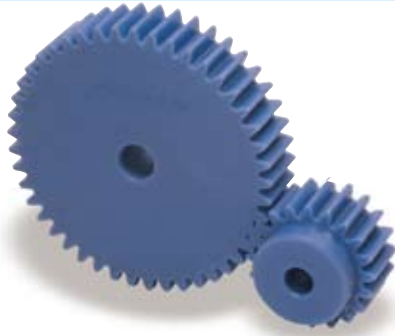
Bevel Gears

Screw Gears

Worm Gear Pair

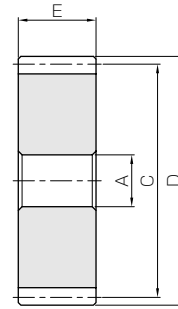
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

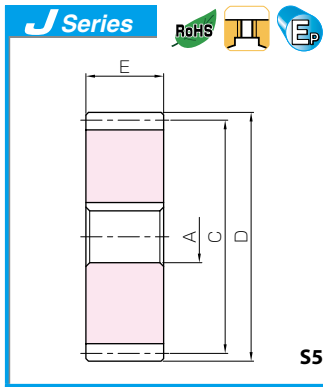
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway					
				A	C	D	E	WidthxDepth					
PSA2-45 ● PSA2-45 J12 ● PSA2-45 J14 ● PSA2-45 J15 ● PSA2-45 J16 ● PSA2-45 J18 ● PSA2-45 J19 ● PSA2-45 J20 ● PSA2-45 J22 ● PSA2-45 J25 ● PSA2-45 J28 ● PSA2-45 J30 ● PSA2-45 J32 ● PSA2-45 J35 ● PSA2-45 J40	m2	45	S5	12	90	94	20	—					
S5K			12	4 x 1.8									
S5K			14	5 x 2.3									
S5K	15		5 x 2.3										
S5K	16		5 x 2.3										
S5K	18		6 x 2.8										
S5K	19		6 x 2.8										
S5K	20		6 x 2.8										
S5K	22		6 x 2.8										
S5K	25		8 x 3.3										
S5K	28		8 x 3.3										
S5K	30		8 x 3.3										
S5K	32		10 x 3.3										
S5K	35		10 x 3.3										
S5K	40	12 x 3.3											
PSA2-48 ● PSA2-48 J12 ● PSA2-48 J14 ● PSA2-48 J15 ● PSA2-48 J16 ● PSA2-48 J18 ● PSA2-48 J19 ● PSA2-48 J20 ● PSA2-48 J22 ● PSA2-48 J25 ● PSA2-48 J28 ● PSA2-48 J30 ● PSA2-48 J32 ● PSA2-48 J35 ● PSA2-48 J40 ● PSA2-48 J45	m2	48	S5	12	96	100	20	—					
S5K			12	4 x 1.8									
S5K			14	5 x 2.3									
S5K			15	5 x 2.3									
S5K			16	5 x 2.3									
S5K			18	6 x 2.8									
S5K			19	6 x 2.8									
S5K			20	6 x 2.8									
S5K			22	6 x 2.8									
S5K			25	8 x 3.3									
S5K			28	8 x 3.3									
S5K			30	8 x 3.3									
S5K			32	10 x 3.3									
S5K			35	10 x 3.3									
S5K			40	12 x 3.3									
S5K			45	14 x 3.8									
PSA2-50 ● PSA2-50 J12 ● PSA2-50 J14 ● PSA2-50 J15 ● PSA2-50 J16 ● PSA2-50 J18 ● PSA2-50 J19 ● PSA2-50 J20 ● PSA2-50 J22 ● PSA2-50 J25 ● PSA2-50 J28 ● PSA2-50 J30 ● PSA2-50 J32 ● PSA2-50 J35 ● PSA2-50 J40 ● PSA2-50 J45			m2	50				S5	12	100	104	20	—
S5K								12	4 x 1.8				
S5K	14	5 x 2.3											
S5K	15	5 x 2.3											
S5K	16	5 x 2.3											
S5K	18	6 x 2.8											
S5K	19	6 x 2.8											
S5K	20	6 x 2.8											
S5K	22	6 x 2.8											
S5K	25	8 x 3.3											
S5K	28	8 x 3.3											
S5K	30	8 x 3.3											
S5K	32	10 x 3.3											
S5K	35	10 x 3.3											
S5K	40	12 x 3.3											
S5K	45	14 x 3.8											

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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.

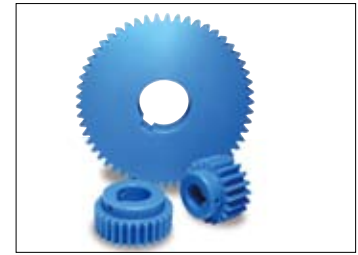
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- ② Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



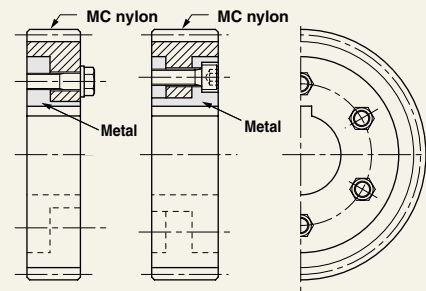
Allowable torque (N-m) Bending strength	Allowable torque (kgf-m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
13.7	1.40	0~0.44	0.15	PSA2-45
			0.15	● PSA2-45 J12
			0.15	● PSA2-45 J14
			0.15	● PSA2-45 J15
			0.15	● PSA2-45 J16
			0.14	● PSA2-45 J18
			0.14	● PSA2-45 J19
			0.14	● PSA2-45 J20
			0.14	● PSA2-45 J22
			0.14	● PSA2-45 J25
			0.14	● PSA2-45 J28
			0.13	● PSA2-45 J30
			0.13	● PSA2-45 J32
			0.13	● PSA2-45 J35
			0.12	● PSA2-45 J40
14.9	1.52	0~0.44	0.17	PSA2-48
			0.17	● PSA2-48 J12
			0.17	● PSA2-48 J14
			0.17	● PSA2-48 J15
			0.17	● PSA2-48 J16
			0.16	● PSA2-48 J18
			0.16	● PSA2-48 J19
			0.16	● PSA2-48 J20
			0.16	● PSA2-48 J22
			0.16	● PSA2-48 J25
			0.16	● PSA2-48 J28
			0.15	● PSA2-48 J30
			0.15	● PSA2-48 J32
			0.15	● PSA2-48 J35
			0.14	● PSA2-48 J40
0.13	● PSA2-48 J45			
15.7	1.60	0~0.44	0.18	PSA2-50
			0.18	● PSA2-50 J12
			0.18	● PSA2-50 J14
			0.18	● PSA2-50 J15
			0.18	● PSA2-50 J16
			0.18	● PSA2-50 J18
			0.18	● PSA2-50 J19
			0.18	● PSA2-50 J20
			0.18	● PSA2-50 J22
			0.17	● PSA2-50 J25
			0.17	● PSA2-50 J28
			0.17	● PSA2-50 J30
			0.17	● PSA2-50 J32
			0.16	● PSA2-50 J35
			0.15	● PSA2-50 J40
0.15	● PSA2-50 J45			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

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Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

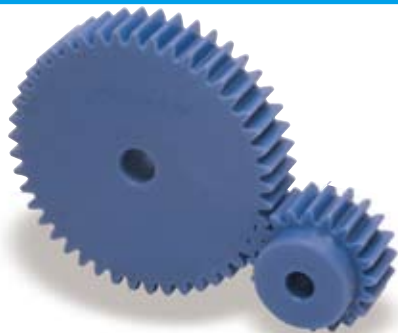
Bevel Gears

Screw Gears

Worm Gear Pair

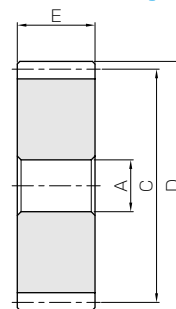
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

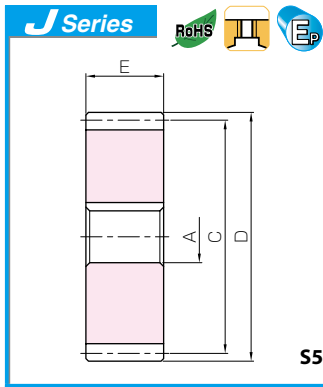
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA2-55 ● PSA2-55 J12 ● PSA2-55 J14 ● PSA2-55 J15 ● PSA2-55 J16 ● PSA2-55 J18 ● PSA2-55 J19 ● PSA2-55 J20 ● PSA2-55 J22 ● PSA2-55 J25 ● PSA2-55 J28 ● PSA2-55 J30 ● PSA2-55 J32 ● PSA2-55 J35 ● PSA2-55 J40 ● PSA2-55 J45 ● PSA2-55 J50	m2	55	S5	12	110	114	20	—
S5K			12	4 x 1.8				
S5K			14	5 x 2.3				
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K			20	6 x 2.8				
S5K			22	6 x 2.8				
S5K			25	8 x 3.3				
S5K			28	8 x 3.3				
S5K			30	8 x 3.3				
S5K			32	10 x 3.3				
S5K			35	10 x 3.3				
S5K			40	12 x 3.3				
S5K		45	14 x 3.8					
S5K		50	14 x 3.8					
PSA2-60 ● PSA2-60 J12 ● PSA2-60 J14 ● PSA2-60 J15 ● PSA2-60 J16 ● PSA2-60 J18 ● PSA2-60 J19 ● PSA2-60 J20 ● PSA2-60 J22 ● PSA2-60 J25 ● PSA2-60 J28 ● PSA2-60 J30 ● PSA2-60 J32 ● PSA2-60 J35 ● PSA2-60 J40 ● PSA2-60 J45 ● PSA2-60 J50		60	S5	12	120	124	20	—
S5K			12	4 x 1.8				
S5K			14	5 x 2.3				
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K			20	6 x 2.8				
S5K			22	6 x 2.8				
S5K			25	8 x 3.3				
S5K			28	8 x 3.3				
S5K			30	8 x 3.3				
S5K			32	10 x 3.3				
S5K	35		10 x 3.3					
S5K	40		12 x 3.3					
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						
PSA2-65 ● PSA2-65 J15 ● PSA2-65 J16 ● PSA2-65 J18 ● PSA2-65 J19 ● PSA2-65 J20 ● PSA2-65 J22 ● PSA2-65 J25 ● PSA2-65 J28 ● PSA2-65 J30 ● PSA2-65 J32 ● PSA2-65 J35 ● PSA2-65 J40 ● PSA2-65 J45 ● PSA2-65 J50	65	S5	15	130	134	20	—	
S5K		15	5 x 2.3					
S5K		16	5 x 2.3					
S5K		18	6 x 2.8					
S5K		19	6 x 2.8					
S5K		20	6 x 2.8					
S5K		22	6 x 2.8					
S5K		25	8 x 3.3					
S5K		28	8 x 3.3					
S5K		30	8 x 3.3					
S5K		32	10 x 3.3					
S5K		35	10 x 3.3					
S5K		40	12 x 3.3					
S5K		45	14 x 3.8					
S5K		50	14 x 3.8					

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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.

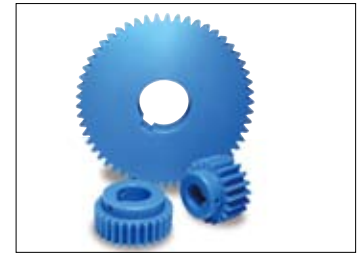
[Caution on Secondary Operations]

- 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



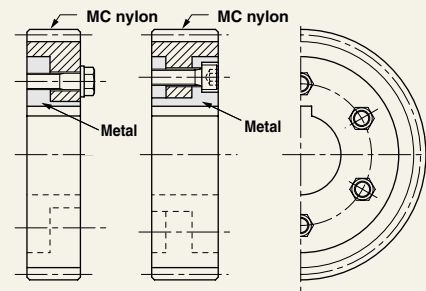
Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)	Catalog No.
Bending strength	Bending strength			● : J Series (Available-on-request)
17.5	1.78	0~0.46	0.22	PSA2-55
			0.22	● PSA2-55 J12
			0.22	● PSA2-55 J14
			0.22	● PSA2-55 J15
			0.22	● PSA2-55 J16
			0.22	● PSA2-55 J18
			0.22	● PSA2-55 J19
			0.22	● PSA2-55 J20
			0.21	● PSA2-55 J22
			0.21	● PSA2-55 J25
			0.21	● PSA2-55 J28
			0.21	● PSA2-55 J30
			0.20	● PSA2-55 J32
			0.20	● PSA2-55 J35
			0.19	● PSA2-55 J40
			0.18	● PSA2-55 J45
0.18	● PSA2-55 J50			
19.3	1.97	0~0.46	0.26	PSA2-60
			0.26	● PSA2-60 J12
			0.26	● PSA2-60 J14
			0.26	● PSA2-60 J15
			0.26	● PSA2-60 J16
			0.26	● PSA2-60 J18
			0.26	● PSA2-60 J19
			0.26	● PSA2-60 J20
			0.26	● PSA2-60 J22
			0.25	● PSA2-60 J25
			0.25	● PSA2-60 J28
			0.25	● PSA2-60 J30
			0.25	● PSA2-60 J32
			0.24	● PSA2-60 J35
			0.23	● PSA2-60 J40
			0.23	● PSA2-60 J45
0.22	● PSA2-60 J50			
21.1	2.15	0~0.46	0.31	PSA2-65
			0.31	● PSA2-65 J15
			0.31	● PSA2-65 J16
			0.31	● PSA2-65 J18
			0.31	● PSA2-65 J19
			0.30	● PSA2-65 J20
			0.30	● PSA2-65 J22
			0.30	● PSA2-65 J25
			0.30	● PSA2-65 J28
			0.30	● PSA2-65 J30
			0.29	● PSA2-65 J32
			0.29	● PSA2-65 J35
			0.28	● PSA2-65 J40
			0.27	● PSA2-65 J45
			0.27	● PSA2-65 J50

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fastened with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

[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.

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

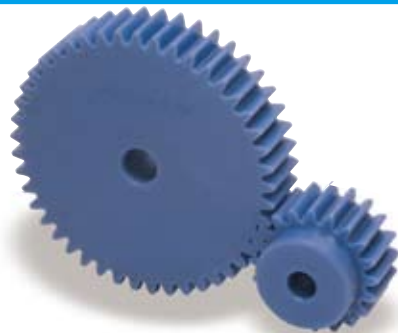
Bevel Gears

Screw Gears

Worm Gear Pair

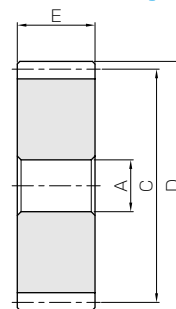
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

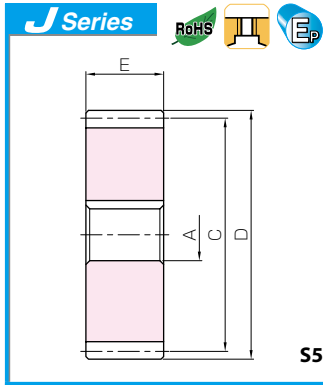
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA2-70 ● PSA2-70 J15 ● PSA2-70 J16 ● PSA2-70 J18 ● PSA2-70 J19 ● PSA2-70 J20 ● PSA2-70 J22 ● PSA2-70 J25 ● PSA2-70 J28 ● PSA2-70 J30 ● PSA2-70 J32 ● PSA2-70 J35 ● PSA2-70 J40 ● PSA2-70 J45 ● PSA2-70 J50	m2	70	S5	15	140	144	20	—
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K			20	6 x 2.8				
S5K			22	6 x 2.8				
S5K			25	8 x 3.3				
S5K			28	8 x 3.3				
S5K			30	8 x 3.3				
S5K		32	10 x 3.3					
S5K		35	10 x 3.3					
S5K		40	12 x 3.3					
S5K		45	14 x 3.8					
S5K		50	14 x 3.8					
PSA2-75 ● PSA2-75 J15 ● PSA2-75 J16 ● PSA2-75 J18 ● PSA2-75 J19 ● PSA2-75 J20 ● PSA2-75 J22 ● PSA2-75 J25 ● PSA2-75 J28 ● PSA2-75 J30 ● PSA2-75 J32 ● PSA2-75 J35 ● PSA2-75 J40 ● PSA2-75 J45 ● PSA2-75 J50		75	S5	15	150	154	20	—
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K	20		6 x 2.8					
S5K	22		6 x 2.8					
S5K	25		8 x 3.3					
S5K	28		8 x 3.3					
S5K	30		8 x 3.3					
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						
PSA2-80 ● PSA2-80 J15 ● PSA2-80 J16 ● PSA2-80 J18 ● PSA2-80 J19 ● PSA2-80 J20 ● PSA2-80 J22 ● PSA2-80 J25 ● PSA2-80 J28 ● PSA2-80 J30 ● PSA2-80 J32 ● PSA2-80 J35 ● PSA2-80 J40 ● PSA2-80 J45 ● PSA2-80 J50	80	S5	15	160	164	20	—	
S5K		15	5 x 2.3					
S5K		16	5 x 2.3					
S5K		18	6 x 2.8					
S5K		19	6 x 2.8					
S5K		20	6 x 2.8					
S5K		22	6 x 2.8					
S5K		25	8 x 3.3					
S5K		28	8 x 3.3					
S5K		30	8 x 3.3					
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						
PSA2-85 ● PSA2-85 J15 ● PSA2-85 J16 ● PSA2-85 J18 ● PSA2-85 J19 ● PSA2-85 J20 ● PSA2-85 J22 ● PSA2-85 J25 ● PSA2-85 J28 ● PSA2-85 J30 ● PSA2-85 J32 ● PSA2-85 J35 ● PSA2-85 J40 ● PSA2-85 J45 ● PSA2-85 J50	85	S5	15	170	174	20	—	
S5K		15	5 x 2.3					
S5K		16	5 x 2.3					
S5K		18	6 x 2.8					
S5K		19	6 x 2.8					
S5K		20	6 x 2.8					
S5K		22	6 x 2.8					
S5K		25	8 x 3.3					
S5K		28	8 x 3.3					
S5K		30	8 x 3.3					
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
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- ④ 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.

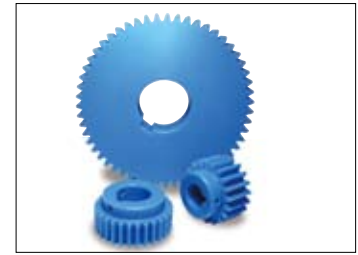
[Caution on Secondary Operations]

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Plastic Spur Gears

Newly added



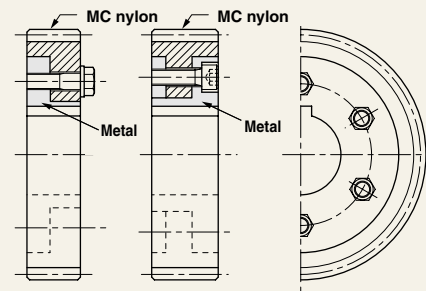
Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
23.0	2.34	0~0.46	0.36	PSA2-70
			0.36	● PSA2-70 J15
			0.36	● PSA2-70 J16
			0.35	● PSA2-70 J18
			0.35	● PSA2-70 J19
			0.35	● PSA2-70 J20
			0.35	● PSA2-70 J22
			0.35	● PSA2-70 J25
			0.35	● PSA2-70 J28
			0.34	● PSA2-70 J30
			0.34	● PSA2-70 J32
			0.34	● PSA2-70 J35
			0.33	● PSA2-70 J40
			0.32	● PSA2-70 J45
0.31	● PSA2-70 J50			
24.9	2.54	0~0.46	0.41	PSA2-75
			0.41	● PSA2-75 J15
			0.41	● PSA2-75 J16
			0.41	● PSA2-75 J18
			0.41	● PSA2-75 J19
			0.41	● PSA2-75 J20
			0.40	● PSA2-75 J22
			0.40	● PSA2-75 J25
			0.40	● PSA2-75 J28
			0.40	● PSA2-75 J30
			0.40	● PSA2-75 J32
			0.39	● PSA2-75 J35
			0.38	● PSA2-75 J40
			0.38	● PSA2-75 J45
0.37	● PSA2-75 J50			
26.7	2.72	0~0.46	0.47	PSA2-80
			0.47	● PSA2-80 J15
			0.47	● PSA2-80 J16
			0.46	● PSA2-80 J18
			0.46	● PSA2-80 J19
			0.46	● PSA2-80 J20
			0.46	● PSA2-80 J22
			0.46	● PSA2-80 J25
			0.46	● PSA2-80 J28
			0.45	● PSA2-80 J30
			0.45	● PSA2-80 J32
			0.45	● PSA2-80 J35
			0.44	● PSA2-80 J40
			0.43	● PSA2-80 J45
0.42	● PSA2-80 J50			
28.5	2.91	0~0.46	0.53	PSA2-85
			0.53	● PSA2-85 J15
			0.53	● PSA2-85 J16
			0.52	● PSA2-85 J18
			0.52	● PSA2-85 J19
			0.52	● PSA2-85 J20
			0.52	● PSA2-85 J22
			0.52	● PSA2-85 J25
			0.52	● PSA2-85 J28
			0.51	● PSA2-85 J30
			0.51	● PSA2-85 J32
			0.51	● PSA2-85 J35
			0.50	● PSA2-85 J40
			0.49	● PSA2-85 J45
0.48	● PSA2-85 J50			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

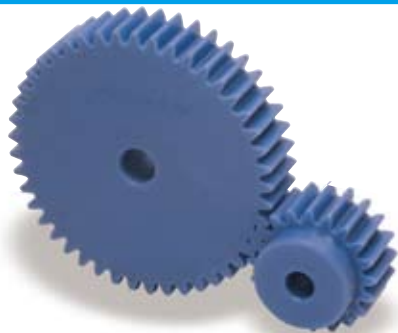
Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

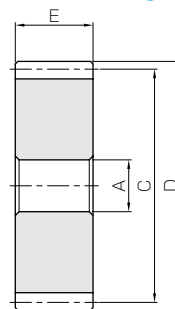
For details, please see Page 334.

- [Caution on J series]
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 - 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.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

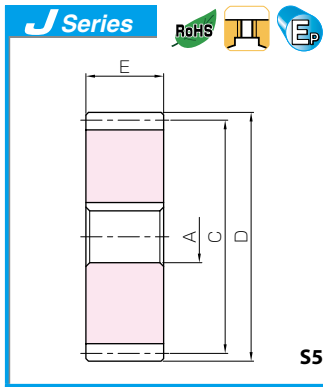
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA2-90 ● PSA2-90 J15 ● PSA2-90 J16 ● PSA2-90 J18 ● PSA2-90 J19 ● PSA2-90 J20 ● PSA2-90 J22 ● PSA2-90 J25 ● PSA2-90 J28 ● PSA2-90 J30 ● PSA2-90 J32 ● PSA2-90 J35 ● PSA2-90 J40 ● PSA2-90 J45 ● PSA2-90 J50	m2	90	S5	15	180	184	20	—
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8
PSA2-95 ● PSA2-95 J15 ● PSA2-95 J16 ● PSA2-95 J18 ● PSA2-95 J19 ● PSA2-95 J20 ● PSA2-95 J22 ● PSA2-95 J25 ● PSA2-95 J28 ● PSA2-95 J30 ● PSA2-95 J32 ● PSA2-95 J35 ● PSA2-95 J40 ● PSA2-95 J45 ● PSA2-95 J50	m2	95	S5	15	190	194	20	—
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8
PSA2-100 ● PSA2-100 J15 ● PSA2-100 J16 ● PSA2-100 J18 ● PSA2-100 J19 ● PSA2-100 J20 ● PSA2-100 J22 ● PSA2-100 J25 ● PSA2-100 J28 ● PSA2-100 J30 ● PSA2-100 J32 ● PSA2-100 J35 ● PSA2-100 J40 ● PSA2-100 J45 ● PSA2-100 J50	m2	100	S5	15	200	204	20	—
			S5K	15				5 x 2.3
			S5K	16				5 x 2.3
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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.

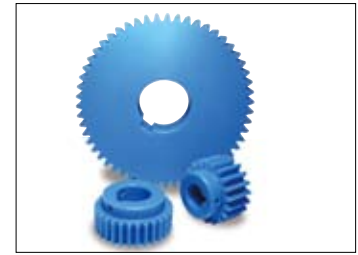
[Caution on Secondary Operations]

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Plastic Spur Gears

Newly added



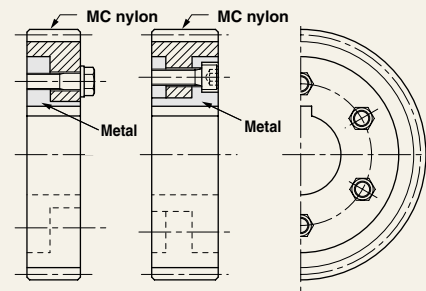
Allowable torque (N-m) Bending strength	Allowable torque (kgf-m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
30.4	3.10	0~0.46	0.59	PSA2-90
			0.59	● PSA2-90 J15
			0.59	● PSA2-90 J16
			0.59	● PSA2-90 J18
			0.59	● PSA2-90 J19
			0.59	● PSA2-90 J20
			0.59	● PSA2-90 J22
			0.58	● PSA2-90 J25
			0.58	● PSA2-90 J28
			0.58	● PSA2-90 J30
			0.58	● PSA2-90 J32
			0.57	● PSA2-90 J35
			0.56	● PSA2-90 J40
			0.56	● PSA2-90 J45
0.55	● PSA2-90 J50			
32.3	3.29	0~0.46	0.66	PSA2-95
			0.66	● PSA2-95 J15
			0.66	● PSA2-95 J16
			0.66	● PSA2-95 J18
			0.65	● PSA2-95 J19
			0.65	● PSA2-95 J20
			0.65	● PSA2-95 J22
			0.65	● PSA2-95 J25
			0.65	● PSA2-95 J28
			0.64	● PSA2-95 J30
			0.64	● PSA2-95 J32
			0.64	● PSA2-95 J35
			0.63	● PSA2-95 J40
			0.62	● PSA2-95 J45
0.62	● PSA2-95 J50			
34.2	3.48	0~0.46	0.73	PSA2-100
			0.73	● PSA2-100 J15
			0.73	● PSA2-100 J16
			0.73	● PSA2-100 J18
			0.73	● PSA2-100 J19
			0.73	● PSA2-100 J20
			0.72	● PSA2-100 J22
			0.72	● PSA2-100 J25
			0.72	● PSA2-100 J28
			0.72	● PSA2-100 J30
			0.71	● PSA2-100 J32
			0.71	● PSA2-100 J35
			0.70	● PSA2-100 J40
			0.69	● PSA2-100 J45
0.69	● PSA2-100 J50			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

[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.

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

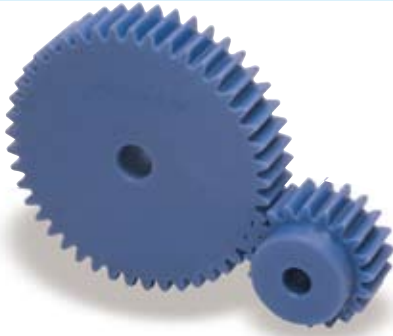
Bevel Gears

Screw Gears

Worm Gear Pair

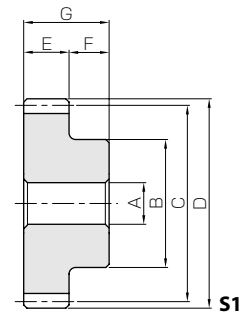
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.

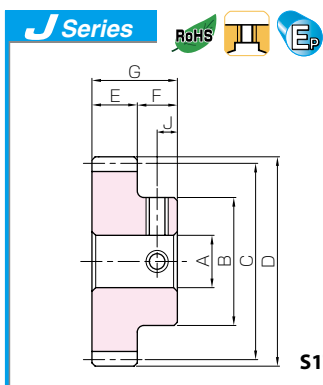


- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

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
				A	B	C	D	E	F	G
PS2.5-12 ● PS2.5-12J10	m2.5	12	S1 S1T2	10 10	23	30	35	25	12	37
PS2.5-13 ● PS2.5-13J10		13	S1 S1K	10 10	25	32.5	37.5	25	12	37
PS2.5-14 ● PS2.5-14J10 ● PS2.5-14J12		14	S1 S1K S1K	10 10 12	25	35	40	25	12	37
PS2.5-15 ● PS2.5-15J12 ● PS2.5-15J14		15	S1 S1K S1K	12 12 14	30	37.5	42.5	25	12	37
PS2.5-16 ● PS2.5-16J12 ● PS2.5-16J14 ● PS2.5-16J15 ● PS2.5-16J16		16	S1 S1K S1K S1K S1K	12 12 14 15 16	32	40	45	25	12	37
PS2.5-18 ● PS2.5-18J12 ● PS2.5-18J14 ● PS2.5-18J15 ● PS2.5-18J16 ● PS2.5-18J18 ● PS2.5-18J19 ● PS2.5-18J20		18	S1 S1K S1K S1K S1K S1K S1K S1K	12 12 14 15 16 18 19 20	38	45	50	25	12	37
PS2.5-20 ● PS2.5-20J12 ● PS2.5-20J14 ● PS2.5-20J15 ● PS2.5-20J16 ● PS2.5-20J18 ● PS2.5-20J19 ● PS2.5-20J20 ● PS2.5-20J22		20	S1 S1K S1K S1K S1K S1K S1K S1K S1K	12 12 14 15 16 18 19 20 22	40	50	55	25	12	37
PS2.5-22 ● PS2.5-22J12 ● PS2.5-22J14 ● PS2.5-22J15 ● PS2.5-22J16 ● PS2.5-22J18 ● PS2.5-22J19 ● PS2.5-22J20 ● PS2.5-22J22 ● PS2.5-22J25		22	S1 S1K S1K S1K S1K S1K S1K S1K S1K S1K	12 12 14 15 16 18 19 20 22 25	44	55	60	25	12	37
PS2.5-24 ● PS2.5-24J12 ● PS2.5-24J14 ● PS2.5-24J15 ● PS2.5-24J16 ● PS2.5-24J18 ● PS2.5-24J19 ● PS2.5-24J20 ● PS2.5-24J22 ● PS2.5-24J25 ● PS2.5-24J28		24	S1 S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K	12 12 14 15 16 18 19 20 22 25 28	48	60	65	25	12	37

- [Caution on Product Characteristics]
- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
 - ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
 - ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
 - ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	4.39	0.45	0~0.44	0.023 0.023	PS2.5-12 ● PS2.5-12J10
—	M4	6					
—	—	—	5.06	0.52	0~0.44	0.028 0.027	PS2.5-13 ● PS2.5-13J10
4 x 1.8	M4	6					
—	—	—	5.77	0.59	0~0.44	0.031 0.031 0.029	PS2.5-14 ● PS2.5-14J10 ● PS2.5-14J12
4 x 1.8	M4	6					
—	—	—	6.42	0.65	0~0.44	0.037 0.036 0.035	PS2.5-15 ● PS2.5-15J12 ● PS2.5-15J14
4 x 1.8	M4	6					
—	—	—	7.09	0.72	0~0.44	0.043 0.042 0.040 0.039 0.038	PS2.5-16 ● PS2.5-16J12 ● PS2.5-16J14 ● PS2.5-16J15 ● PS2.5-16J16
4 x 1.8	M4	6					
5 x 2.3	M4	6					
5 x 2.3	M4	6					
—	—	—	8.28	0.84	0~0.44	0.057 0.056 0.054 0.053 0.052 0.050 0.049 0.047	PS2.5-18 ● PS2.5-18J12 ● PS2.5-18J14 ● PS2.5-18J15 ● PS2.5-18J16 ● PS2.5-18J18 ● PS2.5-18J19 ● PS2.5-18J20
4 x 1.8	M4	6					
5 x 2.3	M4	6					
5 x 2.3	M4	6					
5 x 2.3	M4	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
—	—	—	9.59	0.98	0~0.44	0.070 0.069 0.067 0.066 0.065 0.062 0.061 0.060 0.057	PS2.5-20 ● PS2.5-20J12 ● PS2.5-20J14 ● PS2.5-20J15 ● PS2.5-20J16 ● PS2.5-20J18 ● PS2.5-20J19 ● PS2.5-20J20 ● PS2.5-20J22
4 x 1.8	M4	6					
5 x 2.3	M4	6					
5 x 2.3	M4	6					
5 x 2.3	M4	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
—	—	—	10.8	1.11	0~0.46	0.085 0.084 0.083 0.082 0.081 0.078 0.077 0.075 0.073 0.067	PS2.5-22 ● PS2.5-22J12 ● PS2.5-22J14 ● PS2.5-22J15 ● PS2.5-22J16 ● PS2.5-22J18 ● PS2.5-22J19 ● PS2.5-22J20 ● PS2.5-22J22 ● PS2.5-22J25
4 x 1.8	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
—	—	—	12.1	1.23	0~0.46	0.10 0.10 0.100 0.099 0.098 0.095 0.094 0.092 0.090 0.084 0.079	PS2.5-24 ● PS2.5-24J12 ● PS2.5-24J14 ● PS2.5-24J15 ● PS2.5-24J16 ● PS2.5-24J18 ● PS2.5-24J19 ● PS2.5-24J20 ● PS2.5-24J22 ● PS2.5-24J25 ● PS2.5-24J28
4 x 1.8	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
8 x 3.3	M6	6					

[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.

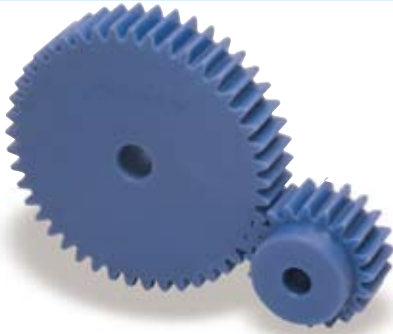
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.

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 concenterbored to reduce the length of the tap. (Products marked with "*" are tap size).

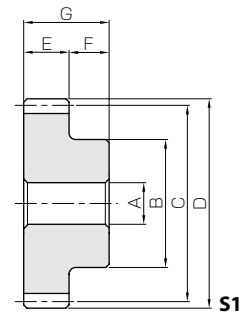
⑤ For products having a tapped hole, a set screw is included.

⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

Bevel Gears

Screw Gears

Worm Gear Pair

Bevel Gearboxes

Other Products

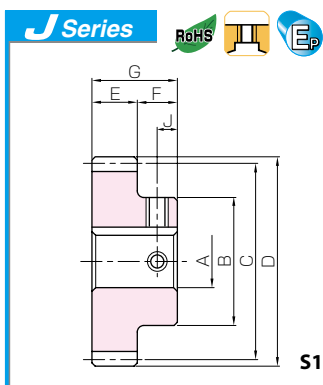
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length									
				A	B	C	D	E	F	G									
PS2.5-25 ● PS2.5-25J12 ● PS2.5-25J14 ● PS2.5-25J15 ● PS2.5-25J16 ● PS2.5-25J18 ● PS2.5-25J19 ● PS2.5-25J20 ● PS2.5-25J22 ● PS2.5-25J25 ● PS2.5-25J28	m2.5	25	S1	12	50	62.5	67.5	25	12	37									
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															
			S1K	28															
			PS2.5-26 ● PS2.5-26J12 ● PS2.5-26J14 ● PS2.5-26J15 ● PS2.5-26J16 ● PS2.5-26J18 ● PS2.5-26J19 ● PS2.5-26J20 ● PS2.5-26J22 ● PS2.5-26J25 ● PS2.5-26J28 ● PS2.5-26J30 ● PS2.5-26J32	m2.5							26	S1	12	55	65	70	25	12	37
												S1K	12						
S1K	14																		
S1K	15																		
S1K	16																		
S1K	18																		
S1K	19																		
S1K	20																		
S1K	22																		
S1K	25																		
S1K	28																		
S1K	30																		
S1K	32																		
PS2.5-28 ● PS2.5-28J12 ● PS2.5-28J14 ● PS2.5-28J15 ● PS2.5-28J16 ● PS2.5-28J18 ● PS2.5-28J19 ● PS2.5-28J20 ● PS2.5-28J22 ● PS2.5-28J25 ● PS2.5-28J28 ● PS2.5-28J30 ● PS2.5-28J32 ● PS2.5-28J35	m2.5	28	S1	12	60	70	75	25	12	37									
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															
			S1K	28															
			S1K	30															
			S1K	32															
S1K	35																		
PS2.5-30 ● PS2.5-30J12 ● PS2.5-30J14 ● PS2.5-30J15 ● PS2.5-30J16 ● PS2.5-30J18 ● PS2.5-30J19 ● PS2.5-30J20 ● PS2.5-30J22 ● PS2.5-30J25 ● PS2.5-30J28 ● PS2.5-30J30 ● PS2.5-30J32 ● PS2.5-30J35	m2.5	30	S1	12	65	75	80	25	12	37									
			S1K	12															
			S1K	14															
			S1K	15															
			S1K	16															
			S1K	18															
			S1K	19															
			S1K	20															
			S1K	22															
			S1K	25															
			S1K	28															
			S1K	30															
			S1K	32															
S1K	35																		

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
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[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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N-m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	12.8	1.30	0~0.46	0.11 0.11 0.11 0.11 0.11 0.10 0.10 0.10 0.099 0.093 0.088	PS2.5-25 ●PS2.5-25J12 ●PS2.5-25J14 ●PS2.5-25J15 ●PS2.5-25J16 ●PS2.5-25J18 ●PS2.5-25J19 ●PS2.5-25J20 ●PS2.5-25J22 ●PS2.5-25J25 ●PS2.5-25J28
4 x 1.8	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
6 x 2.8	M5	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
—	—	—	13.5	1.37	0~0.46	0.12 0.12 0.12 0.12 0.12 0.12 0.11 0.11 0.10 0.097 0.092	PS2.5-26 ●PS2.5-26J12 ●PS2.5-26J14 ●PS2.5-26J15 ●PS2.5-26J16 ●PS2.5-26J18 ●PS2.5-26J19 ●PS2.5-26J20 ●PS2.5-26J22 ●PS2.5-26J25 ●PS2.5-26J28 ●PS2.5-26J30 ●PS2.5-26J32
4 x 1.8	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
10 x 3.3	M8	6					
—	—	—	14.7	1.50	0~0.46	0.15 0.15 0.14 0.14 0.14 0.14 0.14 0.14 0.13 0.13 0.12 0.12 0.11 0.11	PS2.5-28 ●PS2.5-28J12 ●PS2.5-28J14 ●PS2.5-28J15 ●PS2.5-28J16 ●PS2.5-28J18 ●PS2.5-28J19 ●PS2.5-28J20 ●PS2.5-28J22 ●PS2.5-28J25 ●PS2.5-28J28 ●PS2.5-28J30 ●PS2.5-28J32 ●PS2.5-28J35
4 x 1.8	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
10 x 3.3	M8	6					
10 x 3.3	M8	6					
—	—	—	16.0	1.63	0~0.46	0.17 0.17 0.17 0.17 0.16 0.16 0.16 0.16 0.16 0.16 0.15 0.15 0.14 0.14 0.14	PS2.5-30 ●PS2.5-30J12 ●PS2.5-30J14 ●PS2.5-30J15 ●PS2.5-30J16 ●PS2.5-30J18 ●PS2.5-30J19 ●PS2.5-30J20 ●PS2.5-30J22 ●PS2.5-30J25 ●PS2.5-30J28 ●PS2.5-30J30 ●PS2.5-30J32 ●PS2.5-30J35
4 x 1.8	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
5 x 2.3	M4*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
6 x 2.8	M5*	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
8 x 3.3	M6	6					
10 x 3.3	M8	6					
10 x 3.3	M8	6					

[Caution on J series]

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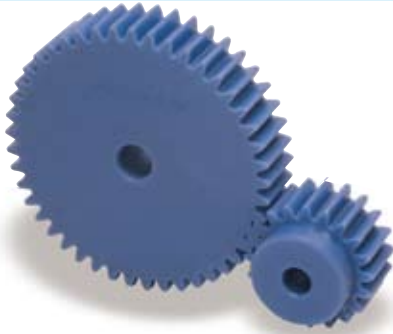
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.

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).

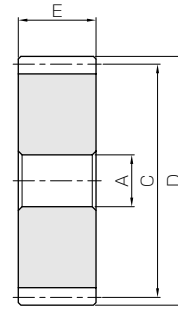
⑤ For products having a tapped hole, a set screw is included.

⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



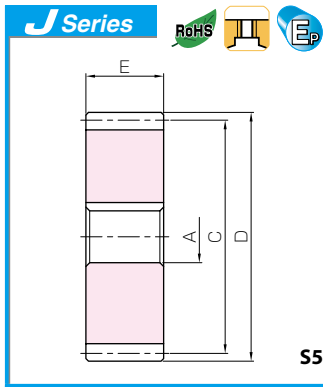
S5

- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	Width×Depth
PSA2.5-32 ● PSA2.5-32 J15 ● PSA2.5-32 J16 ● PSA2.5-32 J18 ● PSA2.5-32 J19 ● PSA2.5-32 J20 ● PSA2.5-32 J22 ● PSA2.5-32 J25 ● PSA2.5-32 J28 ● PSA2.5-32 J30 ● PSA2.5-32 J32 ● PSA2.5-32 J35	m2.5	32	S5	15	80	85	25	—
			S5K	15				5 × 2.3
			S5K	16				5 × 2.3
			S5K	18				6 × 2.8
			S5K	19				6 × 2.8
			S5K	20				6 × 2.8
			S5K	22				6 × 2.8
			S5K	25				8 × 3.3
			S5K	28				8 × 3.3
			S5K	30				8 × 3.3
			S5K	32				10 × 3.3
			S5K	35				10 × 3.3
			S5K	35				10 × 3.3
PSA2.5-35 ● PSA2.5-35 J15 ● PSA2.5-35 J16 ● PSA2.5-35 J18 ● PSA2.5-35 J19 ● PSA2.5-35 J20 ● PSA2.5-35 J22 ● PSA2.5-35 J25 ● PSA2.5-35 J28 ● PSA2.5-35 J30 ● PSA2.5-35 J32 ● PSA2.5-35 J35 ● PSA2.5-35 J40	m2.5	35	S5	15	87.5	92.5	25	—
			S5K	15				5 × 2.3
			S5K	16				5 × 2.3
			S5K	18				6 × 2.8
			S5K	19				6 × 2.8
			S5K	20				6 × 2.8
			S5K	22				6 × 2.8
			S5K	25				8 × 3.3
			S5K	28				8 × 3.3
			S5K	30				8 × 3.3
			S5K	32				10 × 3.3
			S5K	35				10 × 3.3
			S5K	40				12 × 3.3
PSA2.5-36 ● PSA2.5-36 J15 ● PSA2.5-36 J16 ● PSA2.5-36 J18 ● PSA2.5-36 J19 ● PSA2.5-36 J20 ● PSA2.5-36 J22 ● PSA2.5-36 J25 ● PSA2.5-36 J28 ● PSA2.5-36 J30 ● PSA2.5-36 J32 ● PSA2.5-36 J35 ● PSA2.5-36 J40	m2.5	36	S5	15	90	95	25	—
			S5K	15				5 × 2.3
			S5K	16				5 × 2.3
			S5K	18				6 × 2.8
			S5K	19				6 × 2.8
			S5K	20				6 × 2.8
			S5K	22				6 × 2.8
			S5K	25				8 × 3.3
			S5K	28				8 × 3.3
			S5K	30				8 × 3.3
			S5K	32				10 × 3.3
			S5K	35				10 × 3.3
			S5K	40				12 × 3.3
PSA2.5-40 ● PSA2.5-40 J15 ● PSA2.5-40 J16 ● PSA2.5-40 J18 ● PSA2.5-40 J19 ● PSA2.5-40 J20 ● PSA2.5-40 J22 ● PSA2.5-40 J25 ● PSA2.5-40 J28 ● PSA2.5-40 J30 ● PSA2.5-40 J32 ● PSA2.5-40 J35 ● PSA2.5-40 J40 ● PSA2.5-40 J45	m2.5	40	S5	15	100	105	25	—
			S5K	15				5 × 2.3
			S5K	16				5 × 2.3
			S5K	18				6 × 2.8
			S5K	19				6 × 2.8
			S5K	20				6 × 2.8
			S5K	22				6 × 2.8
			S5K	25				8 × 3.3
			S5K	28				8 × 3.3
			S5K	30				8 × 3.3
			S5K	32				10 × 3.3
			S5K	35				10 × 3.3
			S5K	40				12 × 3.3
S5K	45	14 × 3.8						

- [Caution on Product Characteristics]
- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
 - ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
 - ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
 - ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



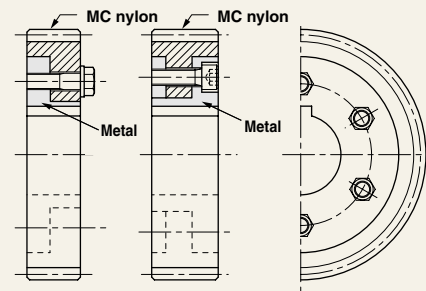
Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
17.4	1.77	0~0.46	0.15	PSA2.5-32
			0.15	● PSA2.5-32 J15
			0.14	● PSA2.5-32 J16
			0.14	● PSA2.5-32 J18
			0.14	● PSA2.5-32 J19
			0.14	● PSA2.5-32 J20
			0.14	● PSA2.5-32 J22
			0.14	● PSA2.5-32 J25
			0.13	● PSA2.5-32 J28
			0.13	● PSA2.5-32 J30
			0.13	● PSA2.5-32 J32
			0.12	● PSA2.5-32 J35
19.5	1.99	0~0.46	0.17	PSA2.5-35
			0.17	● PSA2.5-35 J15
			0.17	● PSA2.5-35 J16
			0.17	● PSA2.5-35 J18
			0.17	● PSA2.5-35 J19
			0.17	● PSA2.5-35 J20
			0.17	● PSA2.5-35 J22
			0.16	● PSA2.5-35 J25
			0.16	● PSA2.5-35 J28
			0.16	● PSA2.5-35 J30
			0.16	● PSA2.5-35 J32
			0.15	● PSA2.5-35 J35
0.14	● PSA2.5-35 J40			
20.3	2.07	0~0.46	0.18	PSA2.5-36
			0.18	● PSA2.5-36 J15
			0.18	● PSA2.5-36 J16
			0.18	● PSA2.5-36 J18
			0.18	● PSA2.5-36 J19
			0.18	● PSA2.5-36 J20
			0.18	● PSA2.5-36 J22
			0.17	● PSA2.5-36 J25
			0.17	● PSA2.5-36 J28
			0.17	● PSA2.5-36 J30
			0.17	● PSA2.5-36 J32
			0.16	● PSA2.5-36 J35
0.15	● PSA2.5-36 J40			
23.2	2.36	0~0.46	0.23	PSA2.5-40
			0.23	● PSA2.5-40 J15
			0.23	● PSA2.5-40 J16
			0.23	● PSA2.5-40 J18
			0.22	● PSA2.5-40 J19
			0.22	● PSA2.5-40 J20
			0.22	● PSA2.5-40 J22
			0.22	● PSA2.5-40 J25
			0.21	● PSA2.5-40 J28
			0.21	● PSA2.5-40 J30
			0.21	● PSA2.5-40 J32
			0.20	● PSA2.5-40 J35
0.20	● PSA2.5-40 J40			
0.19	● PSA2.5-40 J45			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

- [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.

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

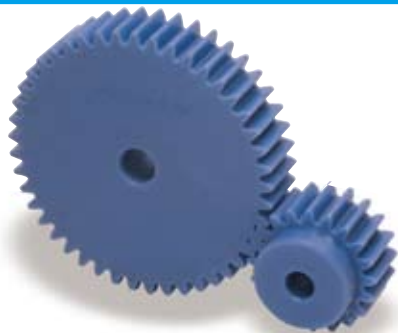
Bevel Gears

Screw Gears

Worm Gear Pair

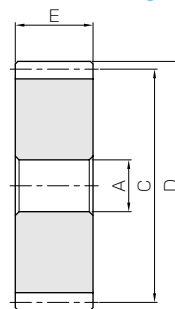
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA2.5-45 ● PSA2.5-45 J15 ● PSA2.5-45 J16 ● PSA2.5-45 J18 ● PSA2.5-45 J19 ● PSA2.5-45 J20 ● PSA2.5-45 J22 ● PSA2.5-45 J25 ● PSA2.5-45 J28 ● PSA2.5-45 J30 ● PSA2.5-45 J32 ● PSA2.5-45 J35 ● PSA2.5-45 J40 ● PSA2.5-45 J45 ● PSA2.5-45 J50	m2.5	45	S5	15	112.5	117.5	25	—
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K	18		6 x 2.8					
S5K	19		6 x 2.8					
S5K	20		6 x 2.8					
S5K	22		6 x 2.8					
S5K	25		8 x 3.3					
S5K	28		8 x 3.3					
S5K	30		8 x 3.3					
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						
PSA2.5-48 ● PSA2.5-48 J15 ● PSA2.5-48 J16 ● PSA2.5-48 J18 ● PSA2.5-48 J19 ● PSA2.5-48 J20 ● PSA2.5-48 J22 ● PSA2.5-48 J25 ● PSA2.5-48 J28 ● PSA2.5-48 J30 ● PSA2.5-48 J32 ● PSA2.5-48 J35 ● PSA2.5-48 J40 ● PSA2.5-48 J45 ● PSA2.5-48 J50	m2.5	48	S5	15	120	125	25	—
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K	18		6 x 2.8					
S5K	19		6 x 2.8					
S5K	20		6 x 2.8					
S5K	22		6 x 2.8					
S5K	25		8 x 3.3					
S5K	28		8 x 3.3					
S5K	30		8 x 3.3					
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						
PSA2.5-50 ● PSA2.5-50 J15 ● PSA2.5-50 J16 ● PSA2.5-50 J18 ● PSA2.5-50 J19 ● PSA2.5-50 J20 ● PSA2.5-50 J22 ● PSA2.5-50 J25 ● PSA2.5-50 J28 ● PSA2.5-50 J30 ● PSA2.5-50 J32 ● PSA2.5-50 J35 ● PSA2.5-50 J40 ● PSA2.5-50 J45 ● PSA2.5-50 J50	m2.5	50	S5	15	125	130	25	—
S5K			15	5 x 2.3				
S5K			16	5 x 2.3				
S5K	18		6 x 2.8					
S5K	19		6 x 2.8					
S5K	20		6 x 2.8					
S5K	22		6 x 2.8					
S5K	25		8 x 3.3					
S5K	28		8 x 3.3					
S5K	30		8 x 3.3					
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
S5K	50	14 x 3.8						

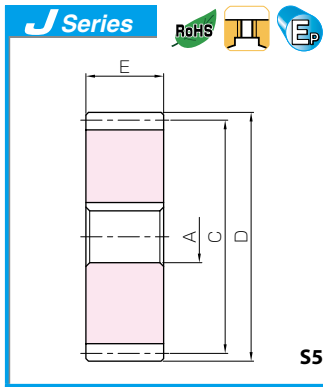
[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.

Spur Gears
Helical Gears
Internal Gears
Racks
CP Racks & Pinions
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Bevel Gears
Screw Gears
Worm Gear Pair
Bevel Gearboxes
Other Products



Plastic Spur Gears

Newly added



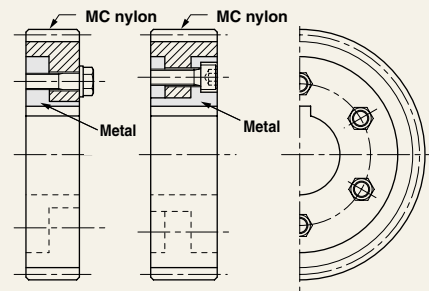
Allowable torque (N-m) Bending strength	Allowable torque (kgf-m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
26.8	2.73	0~0.48	0.29	PSA2.5-45
			0.29	● PSA2.5-45 J15
			0.29	● PSA2.5-45 J16
			0.29	● PSA2.5-45 J18
			0.28	● PSA2.5-45 J19
			0.28	● PSA2.5-45 J20
			0.28	● PSA2.5-45 J22
			0.28	● PSA2.5-45 J25
			0.27	● PSA2.5-45 J28
			0.27	● PSA2.5-45 J30
			0.27	● PSA2.5-45 J32
			0.26	● PSA2.5-45 J35
			0.26	● PSA2.5-45 J40
			0.25	● PSA2.5-45 J45
0.23	● PSA2.5-45 J50			
29.0	2.96	0~0.48	0.33	PSA2.5-48
			0.33	● PSA2.5-48 J15
			0.33	● PSA2.5-48 J16
			0.33	● PSA2.5-48 J18
			0.32	● PSA2.5-48 J19
			0.32	● PSA2.5-48 J20
			0.32	● PSA2.5-48 J22
			0.32	● PSA2.5-48 J25
			0.31	● PSA2.5-48 J28
			0.31	● PSA2.5-48 J30
			0.31	● PSA2.5-48 J32
			0.30	● PSA2.5-48 J35
			0.30	● PSA2.5-48 J40
			0.29	● PSA2.5-48 J45
0.27	● PSA2.5-48 J50			
30.6	3.12	0~0.48	0.36	PSA2.5-50
			0.36	● PSA2.5-50 J15
			0.35	● PSA2.5-50 J16
			0.35	● PSA2.5-50 J18
			0.35	● PSA2.5-50 J19
			0.35	● PSA2.5-50 J20
			0.35	● PSA2.5-50 J22
			0.35	● PSA2.5-50 J25
			0.34	● PSA2.5-50 J28
			0.34	● PSA2.5-50 J30
			0.34	● PSA2.5-50 J32
			0.33	● PSA2.5-50 J35
			0.32	● PSA2.5-50 J40
			0.31	● PSA2.5-50 J45
0.30	● PSA2.5-50 J50			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fastened with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

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

Spur Gears

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Miter Gears

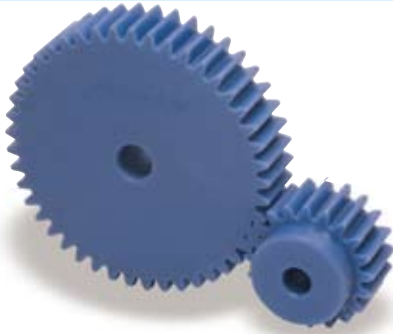
Bevel Gears

Screw Gears

Worm Gear Pair

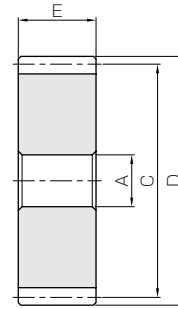
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA2.5-55	m2.5	55	S5	15	137.5	142.5	25	—
● PSA2.5-55 J15			S5K	15				5 x 2.3
● PSA2.5-55 J16			S5K	16				5 x 2.3
● PSA2.5-55 J18			S5K	18				6 x 2.8
● PSA2.5-55 J19			S5K	19				6 x 2.8
● PSA2.5-55 J20			S5K	20				6 x 2.8
● PSA2.5-55 J22			S5K	22				6 x 2.8
● PSA2.5-55 J25			S5K	25				8 x 3.3
● PSA2.5-55 J28			S5K	28				8 x 3.3
● PSA2.5-55 J30			S5K	30				8 x 3.3
● PSA2.5-55 J32			S5K	32				10 x 3.3
● PSA2.5-55 J35			S5K	35				10 x 3.3
● PSA2.5-55 J40			S5K	40				12 x 3.3
● PSA2.5-55 J45			S5K	45				14 x 3.8
● PSA2.5-55 J50		S5K	50	14 x 3.8				
PSA2.5-60		60	S5	15	150	155	25	—
● PSA2.5-60 J15			S5K	15				5 x 2.3
● PSA2.5-60 J16			S5K	16				5 x 2.3
● PSA2.5-60 J18			S5K	18				6 x 2.8
● PSA2.5-60 J19			S5K	19				6 x 2.8
● PSA2.5-60 J20	S5K		20	6 x 2.8				
● PSA2.5-60 J22	S5K		22	6 x 2.8				
● PSA2.5-60 J25	S5K		25	8 x 3.3				
● PSA2.5-60 J28	S5K		28	8 x 3.3				
● PSA2.5-60 J30	S5K		30	8 x 3.3				
● PSA2.5-60 J32	S5K		32	10 x 3.3				
● PSA2.5-60 J35	S5K		35	10 x 3.3				
● PSA2.5-60 J40	S5K		40	12 x 3.3				
● PSA2.5-60 J45	S5K		45	14 x 3.8				
● PSA2.5-60 J50	S5K	50	14 x 3.8					

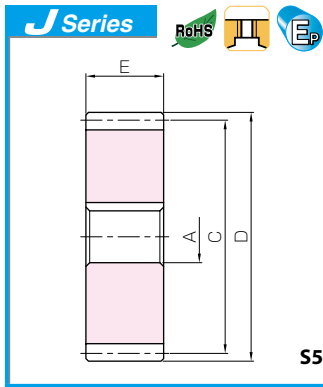
[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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]

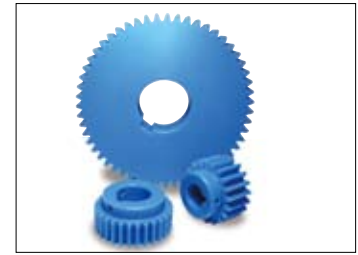
- ① Please read "Caution on Performing Secondary Operations" (Page 36) when performing modifications and/or secondary operations for safety concerns. Haguruma Kobo, the KHK's system for quick modification of KHK stock gears is also available.
- ② Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.

- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products



Plastic Spur Gears

Newly added



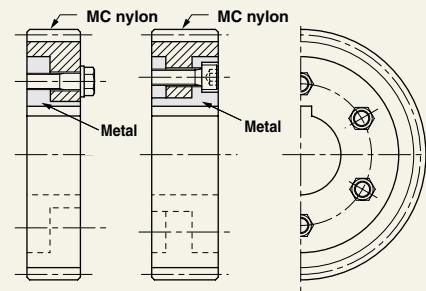
Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)	Catalog No.
Bending strength	Bending strength			● : J Series (Available-on-request)
34.1	3.48	0~0.48	0.43	PSA2.5-55
			0.43	● PSA2.5-55 J15
			0.43	● PSA2.5-55 J16
			0.43	● PSA2.5-55 J18
			0.43	● PSA2.5-55 J19
			0.43	● PSA2.5-55 J20
			0.42	● PSA2.5-55 J22
			0.42	● PSA2.5-55 J25
			0.42	● PSA2.5-55 J28
			0.41	● PSA2.5-55 J30
			0.41	● PSA2.5-55 J32
			0.41	● PSA2.5-55 J35
			0.40	● PSA2.5-55 J40
			0.39	● PSA2.5-55 J45
0.38	● PSA2.5-55 J50			
37.7	3.84	0~0.48	0.51	PSA2.5-60
			0.51	● PSA2.5-60 J15
			0.51	● PSA2.5-60 J16
			0.51	● PSA2.5-60 J18
			0.51	● PSA2.5-60 J19
			0.51	● PSA2.5-60 J20
			0.51	● PSA2.5-60 J22
			0.50	● PSA2.5-60 J25
			0.50	● PSA2.5-60 J28
			0.50	● PSA2.5-60 J30
			0.49	● PSA2.5-60 J32
			0.49	● PSA2.5-60 J35
			0.48	● PSA2.5-60 J40
			0.47	● PSA2.5-60 J45
0.46	● PSA2.5-60 J50			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fastened with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

[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.

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

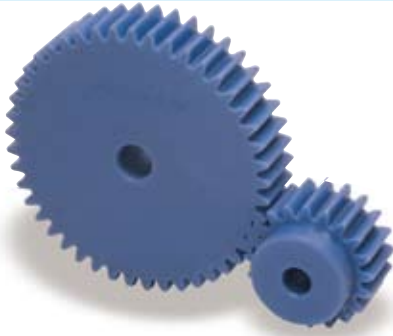
Bevel Gears

Screw Gears

Worm Gear Pair

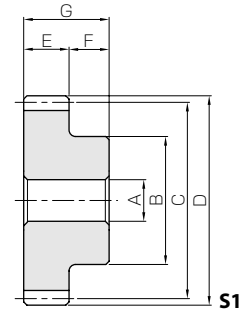
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.



- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

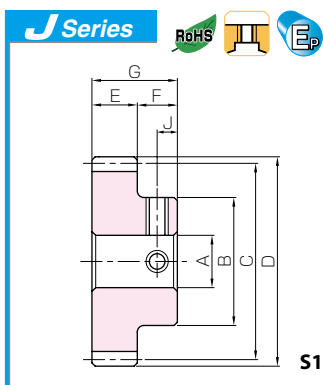
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	
				A	B	C	D	E	F	G	
PS3-12 ● PS3-12J12	m3	12	S1	12	28	36	42	30	15	45	
			S1T2	12							
		PS3-13 ● PS3-13J12	13	S1	12	30	39	45	30	15	45
				S1K	12						
		PS3-14 ● PS3-14J12 ● PS3-14J14	14	S1	12	32	42	48	30	15	45
				S1K	12						
				S1K	14						
		PS3-15 ● PS3-15J14 ● PS3-15J15 ● PS3-15J16	15	S1	14	36	45	51	30	15	45
				S1K	14						
				S1K	15						
S1K	16										
PS3-16 ● PS3-16J14 ● PS3-16J15 ● PS3-16J16 ● PS3-16J18 ● PS3-16J19	16	S1	14	38	48	54	30	15	45		
		S1K	14								
		S1K	15								
		S1K	16								
		S1K	18								
		S1K	19								
PS3-18 ● PS3-18J14 ● PS3-18J15 ● PS3-18J16 ● PS3-18J18 ● PS3-18J19 ● PS3-18J20 ● PS3-18J22	18	S1	14	40	54	60	30	15	45		
		S1K	14								
		S1K	15								
		S1K	16								
		S1K	18								
		S1K	19								
		S1K	20								
		S1K	22								
PS3-20 ● PS3-20J14 ● PS3-20J15 ● PS3-20J16 ● PS3-20J18 ● PS3-20J19 ● PS3-20J20 ● PS3-20J22 ● PS3-20J25 ● PS3-20J28	20	S1	14	50	60	66	30	15	45		
		S1K	14								
		S1K	15								
		S1K	16								
		S1K	18								
		S1K	19								
		S1K	20								
		S1K	22								
PS3-22 ● PS3-22J14 ● PS3-22J15 ● PS3-22J16 ● PS3-22J18 ● PS3-22J19 ● PS3-22J20 ● PS3-22J22 ● PS3-22J25 ● PS3-22J28 ● PS3-22J30	22	S1	14	54	66	72	30	15	45		
		S1K	14								
		S1K	15								
		S1K	16								
		S1K	18								
		S1K	19								
		S1K	20								
		S1K	22								
		S1K	25								
		S1K	28								
S1K	30										

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

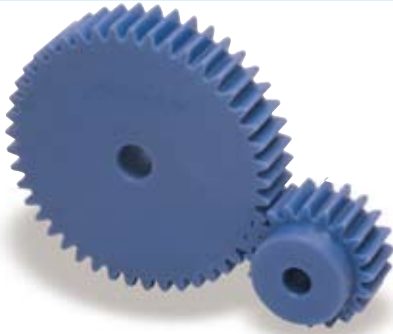
Newly added



Keyway Width×Depth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	7.58	0.77	0~0.52	0.040 0.040	PS3-12 ● PS3-12J12
—	M4	7.5					
—	—	—	8.74	0.89	0~0.52	0.048 0.047	PS3-13 ● PS3-13J12
4 x 1.8	M4	7.5					
—	—	—	9.97	1.02	0~0.52	0.056 0.056 0.053	PS3-14 ● PS3-14J12 ● PS3-14J14
4 x 1.8	M4	7.5					
5 x 2.3	M4	7.5					
—	—	—	11.1	1.13	0~0.52	0.065 0.064 0.063 0.062	PS3-15 ● PS3-15J14 ● PS3-15J15 ● PS3-15J16
5 x 2.3	M4	7.5					
5 x 2.3	M4	7.5					
5 x 2.3	M4	7.5					
—	—	—	12.3	1.25	0~0.52	0.075 0.074 0.073 0.071 0.068 0.067	PS3-16 ● PS3-16J14 ● PS3-16J15 ● PS3-16J16 ● PS3-16J18 ● PS3-16J19
5 x 2.3	M4	7.5					
5 x 2.3	M4	7.5					
5 x 2.3	M4	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
—	—	—	14.3	1.46	0~0.54	0.094 0.093 0.091 0.090 0.087 0.085 0.084 0.080	PS3-18 ● PS3-18J14 ● PS3-18J15 ● PS3-18J16 ● PS3-18J18 ● PS3-18J19 ● PS3-18J20 ● PS3-18J22
5 x 2.3	M4	7.5					
5 x 2.3	M4	7.5					
5 x 2.3	M4	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
—	—	—	16.6	1.69	0~0.54	0.12 0.12 0.12 0.12 0.12 0.12 0.11 0.11 0.10 0.098	PS3-20 ● PS3-20J14 ● PS3-20J15 ● PS3-20J16 ● PS3-20J18 ● PS3-20J19 ● PS3-20J20 ● PS3-20J22 ● PS3-20J25 ● PS3-20J28
5 x 2.3	M4*	7.5					
5 x 2.3	M4*	7.5					
5 x 2.3	M4*	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
8 x 3.3	M6	7.5					
8 x 3.3	M6	7.5					
—	—	—	18.7	1.91	0~0.54	0.15 0.15 0.15 0.15 0.14 0.14 0.14 0.14 0.14 0.13 0.12 0.12	PS3-22 ● PS3-22J14 ● PS3-22J15 ● PS3-22J16 ● PS3-22J18 ● PS3-22J19 ● PS3-22J20 ● PS3-22J22 ● PS3-22J25 ● PS3-22J28 ● PS3-22J30
5 x 2.3	M4*	7.5					
5 x 2.3	M4*	7.5					
5 x 2.3	M4*	7.5					
6 x 2.8	M5*	7.5					
6 x 2.8	M5*	7.5					
6 x 2.8	M5	7.5					
6 x 2.8	M5	7.5					
8 x 3.3	M6	7.5					
8 x 3.3	M6	7.5					
8 x 3.3	M6	7.5					

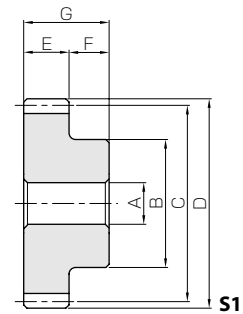
[Caution on J series]

- 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.
- 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.
- Keyways are made according to JIS B1301 standards, Js 9 tolerance.
- 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).
- For products having a tapped hole, a set screw is included.
- Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product is equivalent to the value shown in the table.

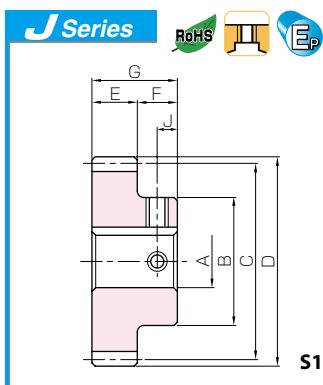


- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products

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
				A	B	C	D	E	F	G
PS3-24 ● PS3-24J14 ● PS3-24J15 ● PS3-24J16 ● PS3-24J18 ● PS3-24J19 ● PS3-24J20 ● PS3-24J22 ● PS3-24J25 ● PS3-24J28 ● PS3-24J30 ● PS3-24J32	m3	24	S1	14	58	72	78	30	15	45
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
			S1K	32						
PS3-25 ● PS3-25J14 ● PS3-25J15 ● PS3-25J16 ● PS3-25J18 ● PS3-25J19 ● PS3-25J20 ● PS3-25J22 ● PS3-25J25 ● PS3-25J28 ● PS3-25J30 ● PS3-25J32 ● PS3-25J35	m3	25	S1	14	60	75	81	30	15	45
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
			S1K	32						
S1K	35									
PS3-26 ● PS3-26J14 ● PS3-26J15 ● PS3-26J16 ● PS3-26J18 ● PS3-26J19 ● PS3-26J20 ● PS3-26J22 ● PS3-26J25 ● PS3-26J28 ● PS3-26J30 ● PS3-26J32 ● PS3-26J35	m3	26	S1	14	65	78	84	30	15	45
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
			S1K	32						
S1K	35									
PS3-28 ● PS3-28J14 ● PS3-28J15 ● PS3-28J16 ● PS3-28J18 ● PS3-28J19 ● PS3-28J20 ● PS3-28J22 ● PS3-28J25 ● PS3-28J28 ● PS3-28J30 ● PS3-28J32 ● PS3-28J35 ● PS3-28J40	m3	28	S1	14	70	84	90	30	15	45
			S1K	14						
			S1K	15						
			S1K	16						
			S1K	18						
			S1K	19						
			S1K	20						
			S1K	22						
			S1K	25						
			S1K	28						
			S1K	30						
			S1K	32						
S1K	35									
S1K	40									

- [Caution on Product Characteristics]
- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
 - ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
 - ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
 - ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	20.9	2.13	0~0.54	0.18	PS3-24
5 x 2.3	M4*	7.5					●PS3-24J14
5 x 2.3	M4*	7.5					●PS3-24J15
5 x 2.3	M4*	7.5					●PS3-24J16
6 x 2.8	M5*	7.5					●PS3-24J18
6 x 2.8	M5*	7.5					●PS3-24J19
6 x 2.8	M5*	7.5					●PS3-24J20
6 x 2.8	M5*	7.5					●PS3-24J22
8 x 3.3	M6	7.5					●PS3-24J25
8 x 3.3	M6	7.5					●PS3-24J28
8 x 3.3	M6	7.5					●PS3-24J30
10 x 3.3	M8	7.5	●PS3-24J32				
—	—	—	22.1	2.25	0~0.54	0.19	PS3-25
5 x 2.3	M4*	7.5					●PS3-25J14
5 x 2.3	M4*	7.5					●PS3-25J15
5 x 2.3	M4*	7.5					●PS3-25J16
6 x 2.8	M5*	7.5					●PS3-25J18
6 x 2.8	M5*	7.5					●PS3-25J19
6 x 2.8	M5*	7.5					●PS3-25J20
6 x 2.8	M5*	7.5					●PS3-25J22
8 x 3.3	M6	7.5					●PS3-25J25
8 x 3.3	M6	7.5					●PS3-25J28
8 x 3.3	M6	7.5					●PS3-25J30
10 x 3.3	M8	7.5	●PS3-25J32				
10 x 3.3	M8	7.5	●PS3-25J35				
—	—	—	23.3	2.37	0~0.54	0.22	PS3-26
5 x 2.3	M4*	7.5					●PS3-26J14
5 x 2.3	M4*	7.5					●PS3-26J15
5 x 2.3	M4*	7.5					●PS3-26J16
6 x 2.8	M5*	7.5					●PS3-26J18
6 x 2.8	M5*	7.5					●PS3-26J19
6 x 2.8	M5*	7.5					●PS3-26J20
6 x 2.8	M5*	7.5					●PS3-26J22
8 x 3.3	M6	7.5					●PS3-26J25
8 x 3.3	M6	7.5					●PS3-26J28
8 x 3.3	M6	7.5					●PS3-26J30
10 x 3.3	M8	7.5	●PS3-26J32				
10 x 3.3	M8	7.5	●PS3-26J35				
—	—	—	25.5	2.60	0~0.54	0.25	PS3-28
5 x 2.3	M4*	7.5					●PS3-28J14
5 x 2.3	M4*	7.5					●PS3-28J15
5 x 2.3	M4*	7.5					●PS3-28J16
6 x 2.8	M5*	7.5					●PS3-28J18
6 x 2.8	M5*	7.5					●PS3-28J19
6 x 2.8	M5*	7.5					●PS3-28J20
6 x 2.8	M5*	7.5					●PS3-28J22
8 x 3.3	M6*	7.5					●PS3-28J25
8 x 3.3	M6*	7.5					●PS3-28J28
8 x 3.3	M6	7.5					●PS3-28J30
10 x 3.3	M8	7.5	●PS3-28J32				
10 x 3.3	M8	7.5	●PS3-28J35				
12 x 3.3	M8	7.5	●PS3-28J40				

[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.

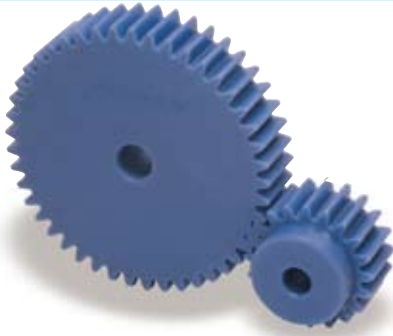
② Number of products we can process for one order is 1 to 20 units. For quantities of 21 or more pieces, we need to quote price and lead time.

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).

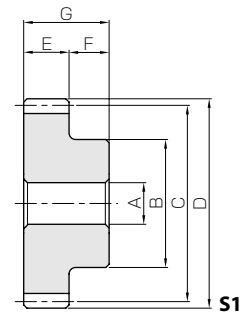
⑤ For products having a tapped hole, a set screw is included.

⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than 0.12N · m for M4, and 0.38N · m for M5.



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* The precision grade of this product 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
				A	B	C	D	E	F	G
PS3-30	m3	30	S1	14	75	90	96	30	15	45
● PS3-30J14			S1K	14						
● PS3-30J15			S1K	15						
● PS3-30J16			S1K	16						
● PS3-30J18			S1K	18						
● PS3-30J19			S1K	19						
● PS3-30J20			S1K	20						
● PS3-30J22			S1K	22						
● PS3-30J25			S1K	25						
● PS3-30J28			S1K	28						
● PS3-30J30			S1K	30						
● PS3-30J32			S1K	32						
● PS3-30J35			S1K	35						
● PS3-30J40			S1K	40						

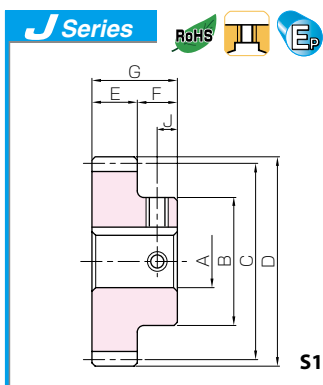
[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.

Spur Gears
Helical Gears
Internal Gears
Racks
CP Racks & Pinions
Miter Gears
Bevel Gears
Screw Gears
Worm Gear Pair
Bevel Gearboxes
Other Products



Plastic Spur Gears

Newly added



Keyway WidthxDepth	Set Screw		Allowable torque (N-m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
	Size	J					
—	—	—	27.7	2.82	0~0.54	0.29	PS3-30
5 x 2.3	M4*	7.5					● PS3-30J14
5 x 2.3	M4*	7.5					● PS3-30J15
5 x 2.3	M4*	7.5					● PS3-30J16
6 x 2.8	M5*	7.5					● PS3-30J18
6 x 2.8	M5*	7.5					● PS3-30J19
6 x 2.8	M5*	7.5					● PS3-30J20
6 x 2.8	M5*	7.5					● PS3-30J22
8 x 3.3	M6*	7.5					● PS3-30J25
8 x 3.3	M6*	7.5					● PS3-30J28
8 x 3.3	M6*	7.5					● PS3-30J30
10 x 3.3	M8	7.5					● PS3-30J32
10 x 3.3	M8	7.5					● PS3-30J35
12 x 3.3	M8	7.5					● PS3-30J40

[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 For products having a tapped hole, a set screw is included.
- ⑥ Since tapped holes of plastic products are easily broken, avoid too much tightening when fastening screws. For products which have a short tapped hole (Products marked with "*" are the tap size), fasten with torques less than $0.12N \cdot m$ for M4, and $0.38N \cdot m$ for M5.

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

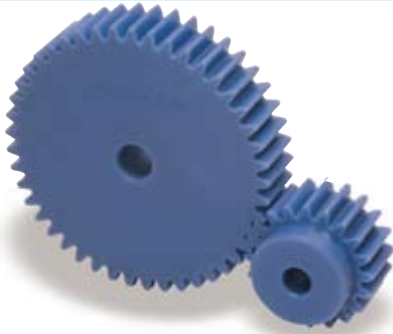
Bevel Gears

Screw Gears

Worm Gear Pair

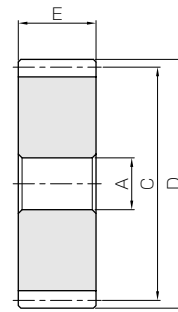
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

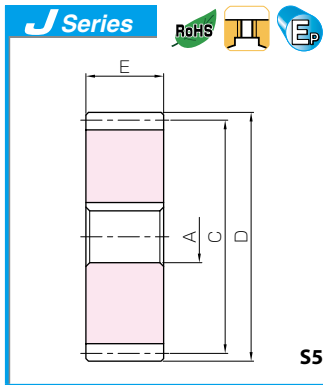
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA3-32 ● PSA3-32 J18 ● PSA3-32 J19 ● PSA3-32 J20 ● PSA3-32 J22 ● PSA3-32 J25 ● PSA3-32 J28 ● PSA3-32 J30 ● PSA3-32 J32 ● PSA3-32 J35 ● PSA3-32 J40	m3	32	S5	18	96	102	30	—
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K			20	6 x 2.8				
S5K			22	6 x 2.8				
S5K			25	8 x 3.3				
S5K			28	8 x 3.3				
S5K			30	8 x 3.3				
S5K			32	10 x 3.3				
S5K			35	10 x 3.3				
S5K			40	12 x 3.3				
PSA3-35 ● PSA3-35 J18 ● PSA3-35 J19 ● PSA3-35 J20 ● PSA3-35 J22 ● PSA3-35 J25 ● PSA3-35 J28 ● PSA3-35 J30 ● PSA3-35 J32 ● PSA3-35 J35 ● PSA3-35 J40 ● PSA3-35 J45			m3	35				S5
S5K	18	6 x 2.8						
S5K	19	6 x 2.8						
S5K	20	6 x 2.8						
S5K	22	6 x 2.8						
S5K	25	8 x 3.3						
S5K	28	8 x 3.3						
S5K	30	8 x 3.3						
S5K	32	10 x 3.3						
S5K	35	10 x 3.3						
S5K	40	12 x 3.3						
S5K	45	14 x 3.8						
PSA3-36 ● PSA3-36 J18 ● PSA3-36 J19 ● PSA3-36 J20 ● PSA3-36 J22 ● PSA3-36 J25 ● PSA3-36 J28 ● PSA3-36 J30 ● PSA3-36 J32 ● PSA3-36 J35 ● PSA3-36 J40 ● PSA3-36 J45 ● PSA3-36 J50	m3	36	S5	18	108	114	30	—
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K			20	6 x 2.8				
S5K			22	6 x 2.8				
S5K			25	8 x 3.3				
S5K			28	8 x 3.3				
S5K			30	8 x 3.3				
S5K			32	10 x 3.3				
S5K			35	10 x 3.3				
S5K			40	12 x 3.3				
S5K			45	14 x 3.8				
S5K	50	14 x 3.8						
PSA3-40 ● PSA3-40 J18 ● PSA3-40 J19 ● PSA3-40 J20 ● PSA3-40 J22 ● PSA3-40 J25 ● PSA3-40 J28 ● PSA3-40 J30 ● PSA3-40 J32 ● PSA3-40 J35 ● PSA3-40 J40 ● PSA3-40 J45 ● PSA3-40 J50	m3	40	S5	18	120	126	30	—
S5K			18	6 x 2.8				
S5K			19	6 x 2.8				
S5K			20	6 x 2.8				
S5K			22	6 x 2.8				
S5K			25	8 x 3.3				
S5K			28	8 x 3.3				
S5K			30	8 x 3.3				
S5K			32	10 x 3.3				
S5K			35	10 x 3.3				
S5K			40	12 x 3.3				
S5K			45	14 x 3.8				
S5K	50	14 x 3.8						

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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.

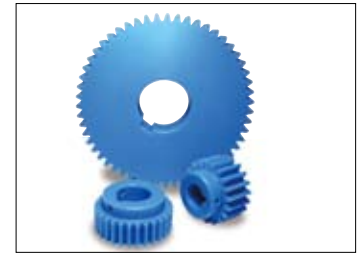
[Caution on Secondary Operations]

- 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.



Plastic Spur Gears

Newly added



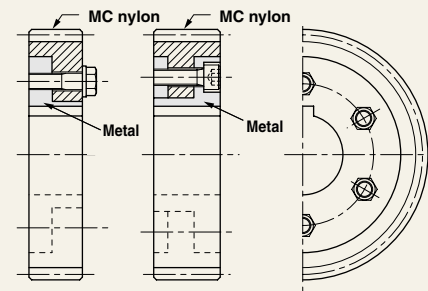
Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)	Catalog No.
Bending strength	Bending strength			● : J Series (Available-on-request)
30.1	3.07	0~0.54	0.25	PSA3-32
			0.25	● PSA3-32 J18
			0.25	● PSA3-32 J19
			0.25	● PSA3-32 J20
			0.25	● PSA3-32 J22
			0.24	● PSA3-32 J25
			0.24	● PSA3-32 J28
			0.24	● PSA3-32 J30
			0.23	● PSA3-32 J32
			0.23	● PSA3-32 J35
			0.22	● PSA3-32 J40
33.8	3.44	0~0.56	0.30	PSA3-35
			0.30	● PSA3-35 J18
			0.30	● PSA3-35 J19
			0.30	● PSA3-35 J20
			0.30	● PSA3-35 J22
			0.29	● PSA3-35 J25
			0.29	● PSA3-35 J28
			0.28	● PSA3-35 J30
			0.28	● PSA3-35 J32
			0.28	● PSA3-35 J35
			0.27	● PSA3-35 J40
0.25	● PSA3-35 J45			
35.1	3.57	0~0.56	0.32	PSA3-36
			0.32	● PSA3-36 J18
			0.32	● PSA3-36 J19
			0.32	● PSA3-36 J20
			0.31	● PSA3-36 J22
			0.31	● PSA3-36 J25
			0.31	● PSA3-36 J28
			0.30	● PSA3-36 J30
			0.30	● PSA3-36 J32
			0.29	● PSA3-36 J35
			0.28	● PSA3-36 J40
			0.27	● PSA3-36 J45
			0.26	● PSA3-36 J50
40.0	4.08	0~0.56	0.39	PSA3-40
			0.39	● PSA3-40 J18
			0.39	● PSA3-40 J19
			0.39	● PSA3-40 J20
			0.39	● PSA3-40 J22
			0.38	● PSA3-40 J25
			0.38	● PSA3-40 J28
			0.38	● PSA3-40 J30
			0.37	● PSA3-40 J32
			0.37	● PSA3-40 J35
			0.36	● PSA3-40 J40
			0.35	● PSA3-40 J45
			0.33	● PSA3-40 J50

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.

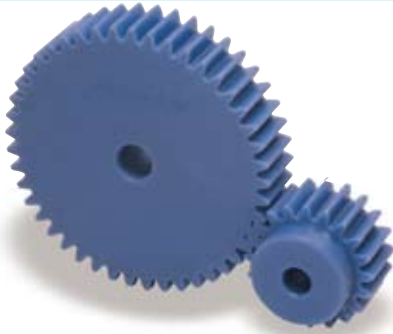


Sectional Parts

For details, please see Page 334.

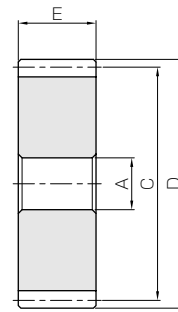
[Caution on J series]

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



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

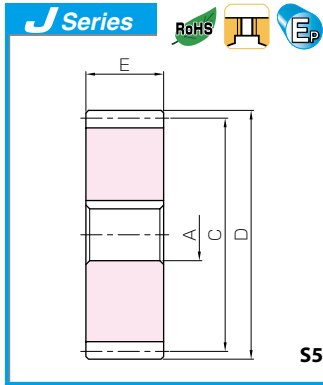
Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA3-45 ● PSA3-45 J18 ● PSA3-45 J19 ● PSA3-45 J20 ● PSA3-45 J22 ● PSA3-45 J25 ● PSA3-45 J28 ● PSA3-45 J30 ● PSA3-45 J32 ● PSA3-45 J35 ● PSA3-45 J40 ● PSA3-45 J45 ● PSA3-45 J50	m3	45	S5	18	135	141	30	—
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8
PSA3-48 ● PSA3-48 J18 ● PSA3-48 J19 ● PSA3-48 J20 ● PSA3-48 J22 ● PSA3-48 J25 ● PSA3-48 J28 ● PSA3-48 J30 ● PSA3-48 J32 ● PSA3-48 J35 ● PSA3-48 J40 ● PSA3-48 J45 ● PSA3-48 J50	m3	48	S5	18	144	150	30	—
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8
PSA3-50 ● PSA3-50 J18 ● PSA3-50 J19 ● PSA3-50 J20 ● PSA3-50 J22 ● PSA3-50 J25 ● PSA3-50 J28 ● PSA3-50 J30 ● PSA3-50 J32 ● PSA3-50 J35 ● PSA3-50 J40 ● PSA3-50 J45 ● PSA3-50 J50	m3	50	S5	18	150	156	30	—
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8
PSA3-55 ● PSA3-55 J18 ● PSA3-55 J19 ● PSA3-55 J20 ● PSA3-55 J22 ● PSA3-55 J25 ● PSA3-55 J28 ● PSA3-55 J30 ● PSA3-55 J32 ● PSA3-55 J35 ● PSA3-55 J40 ● PSA3-55 J45 ● PSA3-55 J50	m3	55	S5	18	165	171	30	—
			S5K	18				6 x 2.8
			S5K	19				6 x 2.8
			S5K	20				6 x 2.8
			S5K	22				6 x 2.8
			S5K	25				8 x 3.3
			S5K	28				8 x 3.3
			S5K	30				8 x 3.3
			S5K	32				10 x 3.3
			S5K	35				10 x 3.3
			S5K	40				12 x 3.3
			S5K	45				14 x 3.8
			S5K	50				14 x 3.8

[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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.

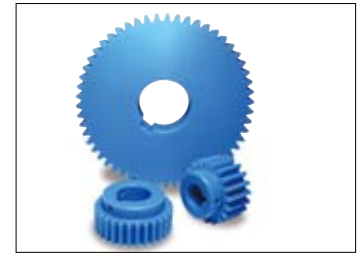
[Caution on Secondary Operations]

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Plastic Spur Gears

Newly added



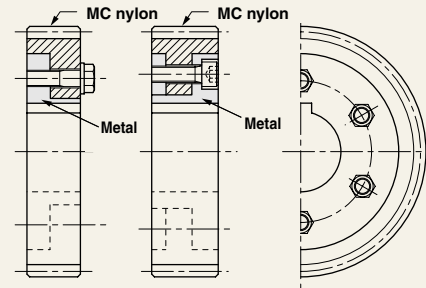
Allowable torque (N·m) Bending strength	Allowable torque (kgf·m) Bending strength	Backlash (mm)	Weight (kg)	Catalog No. ● : J Series (Available-on-request)
46.3	4.72	0~0.56	0.50	PSA3-45
			0.50	● PSA3-45 J18
			0.50	● PSA3-45 J19
			0.50	● PSA3-45 J20
			0.49	● PSA3-45 J22
			0.49	● PSA3-45 J25
			0.48	● PSA3-45 J28
			0.48	● PSA3-45 J30
			0.48	● PSA3-45 J32
			0.47	● PSA3-45 J35
			0.46	● PSA3-45 J40
0.45	● PSA3-45 J45			
0.44	● PSA3-45 J50			
50.2	5.12	0~0.56	0.57	PSA3-48
			0.57	● PSA3-48 J18
			0.57	● PSA3-48 J19
			0.56	● PSA3-48 J20
			0.56	● PSA3-48 J22
			0.56	● PSA3-48 J25
			0.55	● PSA3-48 J28
			0.55	● PSA3-48 J30
			0.55	● PSA3-48 J32
			0.54	● PSA3-48 J35
			0.53	● PSA3-48 J40
0.52	● PSA3-48 J45			
0.51	● PSA3-48 J50			
52.8	5.39	0~0.56	0.61	PSA3-50
			0.61	● PSA3-50 J18
			0.61	● PSA3-50 J19
			0.61	● PSA3-50 J20
			0.61	● PSA3-50 J22
			0.61	● PSA3-50 J25
			0.60	● PSA3-50 J28
			0.60	● PSA3-50 J30
			0.59	● PSA3-50 J32
			0.59	● PSA3-50 J35
			0.58	● PSA3-50 J40
0.57	● PSA3-50 J45			
0.55	● PSA3-50 J50			
58.9	6.01	0~0.56	0.74	PSA3-55
			0.74	● PSA3-55 J18
			0.74	● PSA3-55 J19
			0.74	● PSA3-55 J20
			0.74	● PSA3-55 J22
			0.73	● PSA3-55 J25
			0.73	● PSA3-55 J28
			0.73	● PSA3-55 J30
			0.72	● PSA3-55 J32
			0.72	● PSA3-55 J35
			0.71	● PSA3-55 J40
0.70	● PSA3-55 J45			
0.68	● PSA3-55 J50			

How to attach gears to shafts

To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. While looseness tends to occur in the conditions below, plastic gears are fastened by applying a steel hub.

1. When the circumferential temperature is high
2. For large diameter gears
3. If forward-reverse motion impacts keys

For fastening steel hubs into plastic gears with bolts, see below for various methods. For gears, which cannot be fasten with bolts due to their shape; it is recommended to use the method of fusion bonding with metal cores.



Fastening with a steel hub bolt

Stainless Steel Hubs for PSA are now available!

Standardized sectional stainless steel hubs. It enhances a secure fastening to the shaft.



Sectional Parts

For details, please see Page 334.

- [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.

Spur Gears

Helical Gears

Internal Gears

Racks

CP Racks & Pinions

Miter Gears

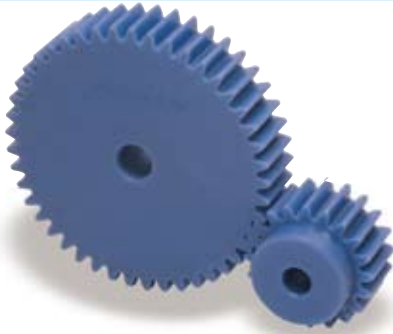
Bevel Gears

Screw Gears

Worm Gear Pair

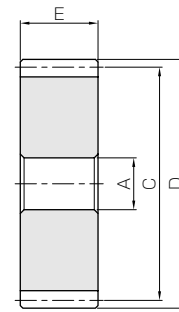
Bevel Gearboxes

Other Products



Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998) * JIS grade 5 (JIS B1702: 1976)
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	115 ~ 120HRR

* Precision grade of this product corresponds to 'equivalent'.



S5

Catalog No. ● : J Series (Available-on-request)	Module	No. of teeth	Shape	Bore	Pitch dia.	Outside dia.	Face width	Keyway
				A	C	D	E	WidthxDepth
PSA3-60	m3	60	S5	18	180	186	30	—
● PSA3-60 J18			S5K	18				6 x 2.8
● PSA3-60 J19			S5K	19				6 x 2.8
● PSA3-60 J20			S5K	20				6 x 2.8
● PSA3-60 J22			S5K	22				6 x 2.8
● PSA3-60 J25			S5K	25				8 x 3.3
● PSA3-60 J28			S5K	28				8 x 3.3
● PSA3-60 J30			S5K	30				8 x 3.3
● PSA3-60 J32			S5K	32				10 x 3.3
● PSA3-60 J35			S5K	35				10 x 3.3
● PSA3-60 J40			S5K	40				12 x 3.3
● PSA3-60 J45			S5K	45				14 x 3.8
● PSA3-60 J50			S5K	50				14 x 3.8

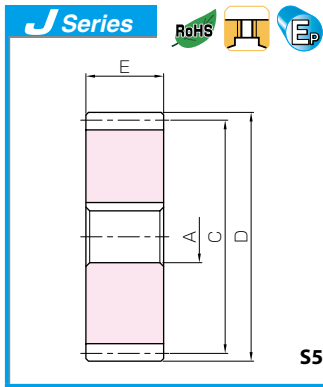
[Caution on Product Characteristics]

- ① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), including bore size (H8 when produced), tooth diameter, and backlash. Please see the section "Design of Plastic Gears" in the technical reference (Page 693).
- ② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see page 35 for more details.
- ③ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate with steel gears.
- ④ 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 Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.

- Spur Gears
- Helical Gears
- Internal Gears
- Racks
- CP Racks & Pinions
- Miter Gears
- Bevel Gears
- Screw Gears
- Worm Gear Pair
- Bevel Gearboxes
- Other Products



Plastic Spur Gears

Newly added



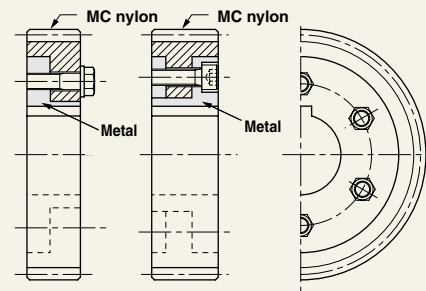
Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)	Catalog No.
Bending strength	Bending strength			● : J Series (Available-on-request)
65.1	6.64	0~0.56	0.89	PSA3-60
			0.88	● PSA3-60 J18
			0.88	● PSA3-60 J19
			0.88	● PSA3-60 J20
			0.88	● PSA3-60 J22
			0.88	● PSA3-60 J25
			0.87	● PSA3-60 J28
			0.87	● PSA3-60 J30
			0.87	● PSA3-60 J32
			0.86	● PSA3-60 J35
			0.85	● PSA3-60 J40
			0.84	● PSA3-60 J45
			0.82	● PSA3-60 J50

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