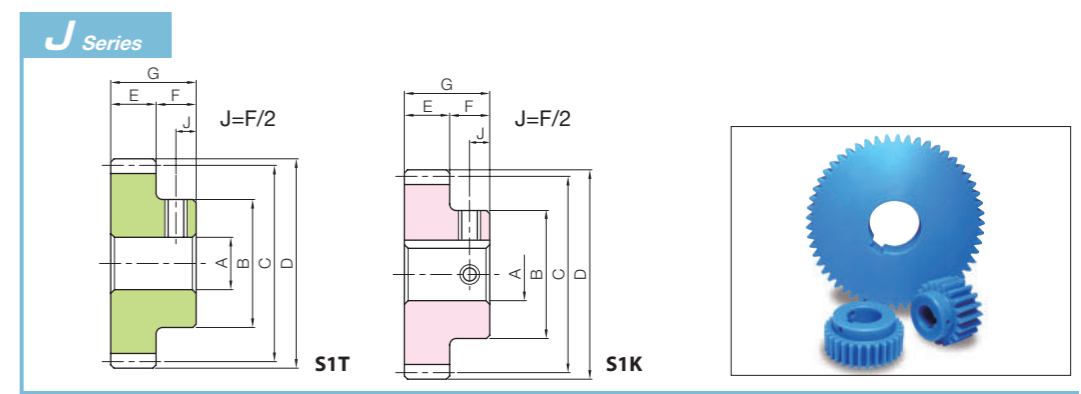
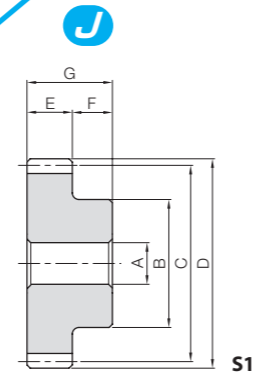


Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1999)*
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	(115 to 120HRR)

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

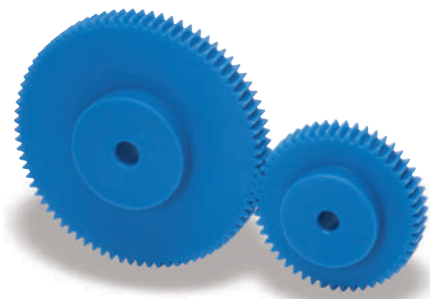


To order J Series products, please specify: **Catalog No. + J + BORE.**

Catalog Number	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width	Total length	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)
			A	B									
PS1-15	15	S1	6	12	15	17	10	10	20	0.41	0.042	0~0.32	0.0027
PS1-16	16			12	16	18				0.45	0.046		0.0030
PS1-18	18			14	18	20				0.53	0.054		0.0041
PS1-20	20			16	20	22				0.61	0.063		0.0053
PS1-22	22			18	22	24				0.69	0.071		0.0062
PS1-24	24		8	20	24	26				0.77	0.079	0.0077	
PS1-25	25			20	25	27				0.82	0.083	0.0082	
PS1-26	26			20	26	28				0.86	0.088	0.0086	
PS1-28	28			22	28	30				0.94	0.096	0.010	
PS1-30	30			25	30	32				1.03	0.10	0.013	
PS1-32	32	10	35	26	32	34	1.11	0.11	0.014				
PS1-35	35			26	35	37	1.25	0.13	0.016				
PS1-36	36			28	36	38	1.30	0.13	0.018				
PS1-40	40			35	40	42	1.48	0.15	0.024				
PS1-45	45			35	45	47	1.71	0.17	0.028				
PS1-48	48		40	48	50	1.86	0.19	0.030					
PS1-50	50			50	52	1.96	0.20	0.032					
PS1-55	55			55	57	2.18	0.22	0.037					
PS1-60	60			60	62	2.41	0.25	0.042					
PS1-65	65			65	67	2.64	0.27	0.048					
PS1-70	70	40	70	72	2.87	0.29	0.057						
PS1-75	75		75	77	3.11	0.32	0.064						
PS1-80	80		80	82	3.34	0.34	0.071						
PS1-85	85		85	87	3.57	0.36	0.079						
PS1-90	90		90	92	3.80	0.39	0.087						
PS1-95	95	40	95	97	4.03	0.41	0.095						
PS1-100	100		100	102	4.27	0.44	0.10						

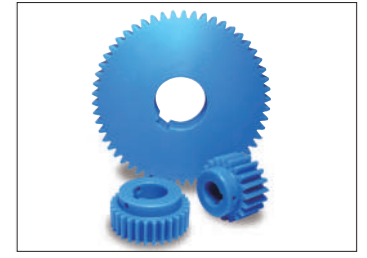
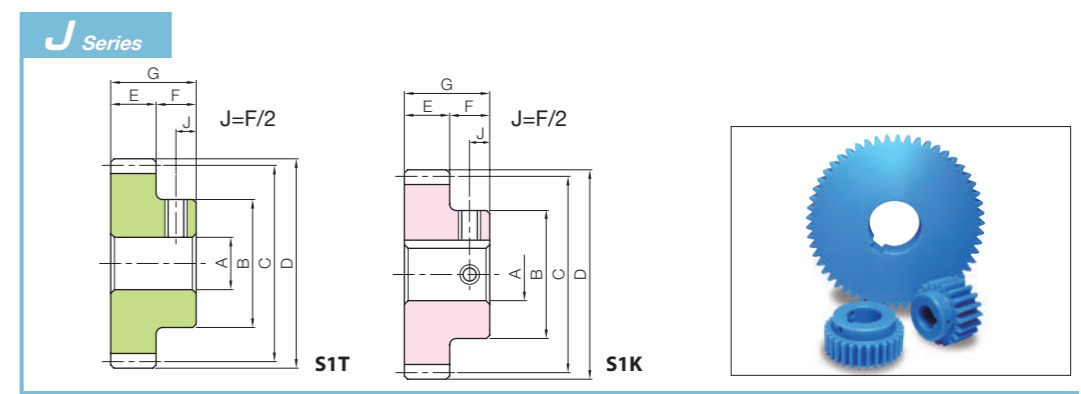
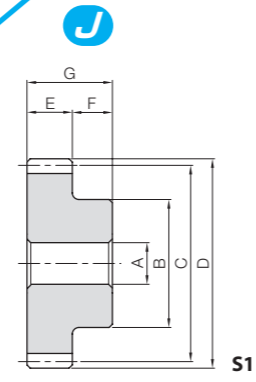
Bore H8	* The product shapes of J Series items are identified by background color.														
	6	8	10	12	14	15	16	17	18	19	20	22	25	28	30
Keyway J _{S9}	—		4x1.8			5x2.3			6x2.8			8x3.3			
Screw size	—		M4			M4			M5			M6			
Catalog Number	M4	M5	M4			M5			M6						
PS1-15 J BORE	S1T														
PS1-16 J BORE	S1T														
PS1-18 J BORE	S1T														
PS1-20 J BORE	S1T														
PS1-22 J BORE		S1T													
PS1-24 J BORE		S1T													
PS1-25 J BORE		S1T													
PS1-26 J BORE		S1T													
PS1-28 J BORE		S1T	S1K												
PS1-30 J BORE		S1T	S1K	S1K											
PS1-32 J BORE		S1T	S1K	S1K	S1K										
PS1-35 J BORE		S1T	S1K	S1K	S1K										
PS1-36 J BORE		S1T	S1K	S1K	S1K	S1K									
PS1-40 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-45 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-48 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-50 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-55 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-60 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-65 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1-70 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
PS1-75 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1-80 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1-85 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1-90 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1-95 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1-100 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	

* In regard to MC Nylon gears, other materials are available for plastic gears, including Ultra High Molecular Weight Polyethylene (U-PE), which has excellent abrasion resistance and resin conforming to the Plastic Implementation Measure (PIM). A single piece order is acceptable and will be produced as a custom-made gear. Please see Page 26 for more details on quotations and orders.



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

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

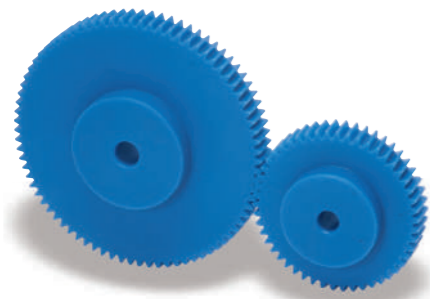


Catalog Number	No. of teeth	Shape	Bore		Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)																							
			A _{H8}	B																																	
PS1.5-15	15	S1	8	18	22.5	25.5	15	10	25	2.61	0.27	0~0.38	0.023																								
PS1.5-16	16			20	24	27								3.76	0.38	0.045																					
PS1.5-18	18			22	27	30											4.22	0.43	0.052																		
PS1.5-20	20			24	30	33														4.38	0.45	0.057															
PS1.5-22	22			26	33	36																	5.00	0.51	0.065												
PS1.5-24	24			28	36	39																				5.79	0.59	0.078									
PS1.5-25	25			30	37.5	40.5																							6.27	0.64	0.087						
PS1.5-26	26			32	39	42																										6.60	0.67	0.093			
PS1.5-28	28			36	42	45																													7.36	0.75	0.11
PS1.5-30	30			38	45	48																															
PS1.5-32	32	40	48	51	8.91	0.91	0.15																														
PS1.5-35	35	42	52.5	55.5				9.69	0.99	0.17																											
PS1.5-36	36	45	54	57							10.5	1.07	0.19																								
PS1.5-40	40	45	60	63										11.3	1.15	0.22																					
PS1.5-45	45	45	67.5	70.5													12.0	1.23	0.25																		
PS1.5-48	48	45	72	75																12.8	1.31	0.27															
PS1.5-50	50	45	75	78																			13.6	1.39	0.31												
PS1.5-55	55	45	82.5	85.5																						14.4	1.47	0.34									
PS1.5-60	60	50	90	93																									10.5	1.07	0.19						
PS1.5-65	65	50	97.5	100.5																												11.3	1.15	0.22			
PS1.5-70	70	50	105	108	12.0	1.23	0.25																														
PS1.5-75	75	50	112.5	115.5				12.8	1.31	0.27																											
PS1.5-80	80	55	120	123							13.6	1.39	0.31																								
PS1.5-85	85	55	127.5	130.5										14.4	1.47	0.34																					
PS1.5-90	90	55	135	138													10.5	1.07	0.19																		
PS1.5-95	95	60	142.5	145.5																11.3	1.15	0.22															
PS1.5-100	100	60	150	153																			12.0	1.23	0.25												

To order J Series products, please specify: **Catalog No. + J + BORE.**

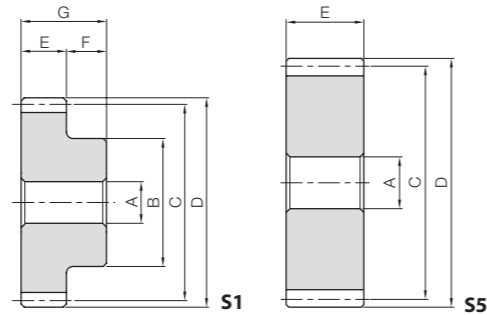
Bore H8	* The product shapes of J Series items are identified by background color.															
	8	10	12	14	15	16	17	18	19	20	22	25	28	30		
Keyway J _{S9}	—			4x1.8			5x2.3			6x2.8			8x3.3			
Screw size	—			M4			M5			M6			—			
Catalog Number	M5	M4			M5			M6			—			—		
PS1.5-15 J BORE	S1T															
PS1.5-16 J BORE	S1T															
PS1.5-18 J BORE	S1T	S1K														
PS1.5-20 J BORE	S1T	S1K	S1K													
PS1.5-22 J BORE	S1T	S1K	S1K													
PS1.5-24 J BORE	S1T	S1K	S1K	S1K	S1K											
PS1.5-25 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K									
PS1.5-26 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K									
PS1.5-28 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K						
PS1.5-30 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
PS1.5-32 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1.5-35 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PS1.5-36 J BORE	S1T	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K			
PS1.5-40 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
PS1.5-45 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
PS1.5-48 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
PS1.5-50 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
PS1.5-55 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K		
PS1.5-60 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-65 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-70 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-75 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-80 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-85 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-90 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-95 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	
PS1.5-100 J BORE			S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	

* In regard to MC Nylon gears, other materials are available for plastic gears, including Ultra High Molecular Weight Polyethylene (U-PE), which has excellent abrasion resistance and resin conforming to the Plastic Implementation Measure (PIM). A single piece order is acceptable and will be produced as a custom-made gear. Please see Page 26 for more details on quotations and orders.

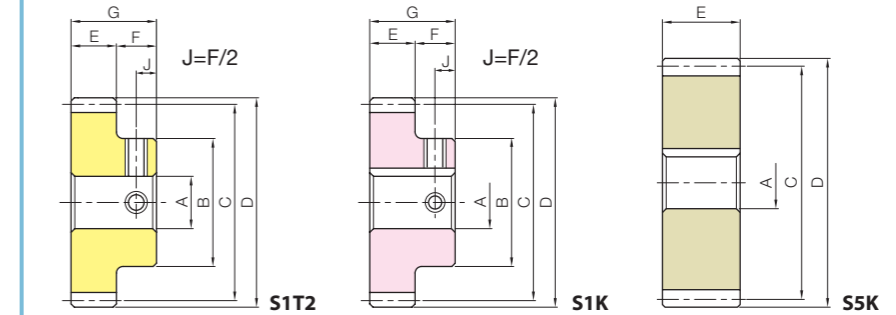


Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998)*
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	(115 to 120HRR)

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



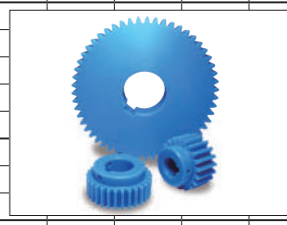
J Series



To order J Series products, please specify: **Catalog No. + J + BORE.**

Catalog Number	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width	Total length	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)															
			A _{H8}	B																								
PS2-12	12	S1	10	18	24	28	10	30	2.25	0.23	0~0.42	0.011																
PS2-13	13			20	26	30							2.59	0.26														
PS2-14	14			20	28	32									2.96	0.30												
PS2-15	15			24	30	34											3.29	0.34										
PS2-16	16			26	32	36													3.63	0.37								
PS2-18	18			30	36	40															4.24	0.43						
PS2-20	20			32	40	44																	4.91	0.50				
PS2-22	22			35	44	48																			5.55	0.57		
PS2-24	24			38	48	52																					6.19	0.63
PS2-25	25			40	50	54																						
PS2-26	26	42	52	56	6.90	0.70																						
PS2-28	28	45	56	60			7.54	0.77																				
PS2-30	30	50	60	64					8.20	0.84																		
PSA2-32	32	S5	12	64							68	20	—	—	8.91	0.91	0~0.44	0.072										
PSA2-35	35			70							74								10.0	1.02								
PSA2-36	36			72							76										10.4	1.06						
PSA2-40	40			80							84												11.9	1.21				
PSA2-45	45			90							94														13.7	1.40		
PSA2-48	48			96							100																14.9	1.52
PSA2-50	50			100							104																	
PSA2-55	55			110	114	17.5					1.78																	
PSA2-60	60			120	124		19.3	1.97																				
PSA2-65	65			130	134				21.1	2.15																		
PSA2-70	70	140	144	23.0	2.34																							
PSA2-75	75	150	154									24.9	2.54															
PSA2-80	80	160	164											26.7	2.72													
PSA2-85	85	170	174													28.5	2.91											
PSA2-90	90	180	184															30.4	3.10									
PSA2-95	95	190	194																	32.3	3.29							
PSA2-100	100	200	204																			34.2	3.48					

Bore H8	* The product shapes of J Series items are identified by background color.																											
	10	12	14	15	16	17	18	19	20	22	25	28	30	32	35	40	45	50										
Keyway J _{S9}	4x1.8				5x2.3				6x2.8				8x3.3				10x3.3				12x3.3				14x3.8			
Screw size	M4				M5				M6				M8				—											
Catalog Number	PS2-12 J BORE S1T2																											
PS2-13 J BORE	S1T2																											
PS2-14 J BORE	S1T2																											
PS2-15 J BORE	S1K																											
PS2-16 J BORE	S1K S1K																											
PS2-18 J BORE	S1K S1K S1K S1K S1K																											
PS2-20 J BORE	S1K S1K S1K S1K S1K S1K																											
PS2-22 J BORE	S1K S1K S1K S1K S1K S1K S1K S1K																											
PS2-24 J BORE	S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K																											
PS2-25 J BORE	S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K																											
PS2-26 J BORE	S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K																											
PS2-28 J BORE	S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K																											
PS2-30 J BORE	S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K S1K																											
PSA2-32 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-35 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-36 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-40 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-45 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-48 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-50 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-55 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-60 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-65 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-70 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-75 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-80 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-85 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-90 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-95 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											
PSA2-100 J BORE	S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K S5K																											



* In regard to MC Nylon gears, other materials are available for plastic gears, including Ultra High Molecular Weight Polyethylene (U-PE), which has excellent abrasion resistance and resin conforming to the Plastic Implementation Measure (PIM). A single piece order is acceptable and will be produced as a custom-made gear. Please see Page 26 for more details on quotations and orders.

Stainless Steel Hubs for PSA Now Available!
Standardized sectional stainless steel hubs. They create a secure method for fastening to the shaft.



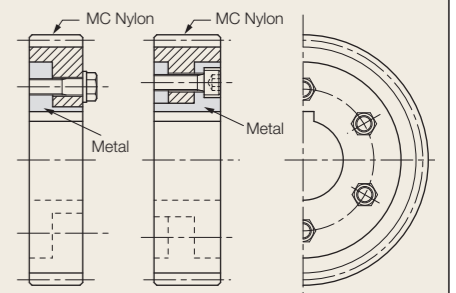
Please see Page 180 for more details.

How to attach gears to shafts

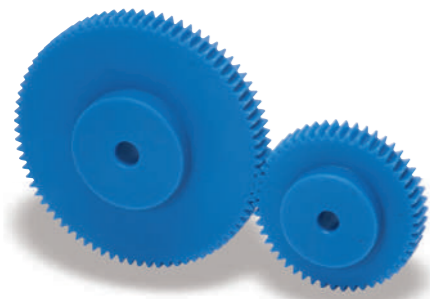
To attach gears to shafts, in case of light loads, methods include using keys, taper pins, spring pins, and press fitting after mounting the setscrews. Since loosening tends to occur in the conditions below, plastic gears are better fastened by using a steel hub.

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 right for various methods.

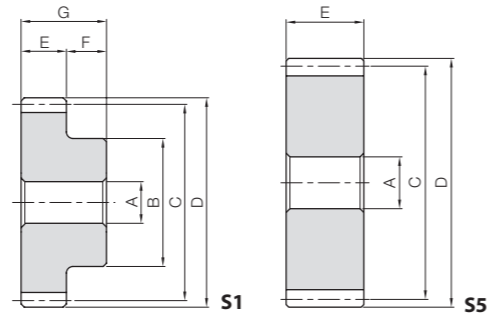


Fastening with a steel hub bolt

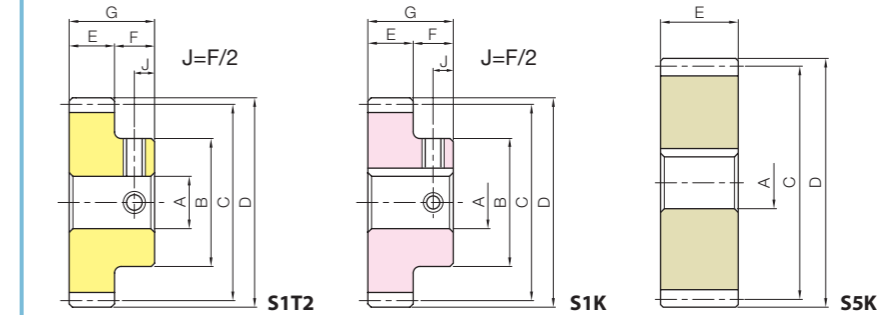


Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998)*
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	(115 to 120HRR)

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



J Series



To order J Series products, please specify: **Catalog No. + J + BORE.**

Catalog Number	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width	Total length	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)				
			A _{H8}	B													
PS2.5-12	12	S1	10	23	30	35	12	37	25	4.39	0.45	0~0.44	0.023				
PS2.5-13	13			25	32.5	37.5				5.06	0.52						
PS2.5-14	14			25	35	40				5.77	0.59						
PS2.5-15	15			30	37.5	42.5				6.42	0.65						
PS2.5-16	16			32	40	45				7.09	0.72						
PS2.5-18	18		12	15	38	45				50	8.28			0.84	13.5	1.37	0.057
PS2.5-20	20				40	50				55	9.59			0.98	17.4	1.77	0.070
PS2.5-22	22				44	55				60	10.8			1.11	19.5	1.99	0.085
PS2.5-24	24				48	60				65	12.1			1.23	20.3	2.07	0.10
PS2.5-25	25				50	62.5				67.5	12.8			1.30	23.2	2.36	0.11
PS2.5-26	26	S5	15	55	65	70	—	—	—	13.5	1.37	0~0.46	0.12				
PS2.5-28	28			60	70	75				14.7	1.50			17.4	1.77	0.15	
PS2.5-30	30			65	75	80				16.0	1.63			19.5	1.99	0.17	
PSA2.5-32	32			80	85	85				17.4	1.77			20.3	2.07	0.18	
PSA2.5-35	35			87.5	92.5	92.5				19.5	1.99			23.2	2.36	0.22	
PSA2.5-36	36			90	95	95				20.3	2.07			26.8	2.73	0.28	
PSA2.5-40	40			100	105	105				23.2	2.36			29.0	2.96	0.32	
PSA2.5-45	45			112.5	117.5	117.5				26.8	2.73			30.6	3.12	0.35	
PSA2.5-48	48			120	125	125				29.0	2.96			34.1	3.48	0.43	
PSA2.5-50	50			125	130	130				30.6	3.12			37.7	3.84	0.51	
PSA2.5-55	55	137.5	142.5	142.5	34.1	3.48											
PSA2.5-60	60	150	155	155	37.7	3.84											

Bore H8	* The product shapes of J Series items are identified by background color.																			
	10	12	14	15	16	17	18	19	20	22	25	28	30	32	35	40	45	50		
Keyway J ₉₉	4x1.8		5x2.3				6x2.8				8x3.3				10x3.3		12x3.3		14x3.8	
Screw size	M4				M5				M6				M8				—			
Catalog Number																				
PS2.5-12 J BORE	S1T2																			
PS2.5-13 J BORE	S1K																			
PS2.5-14 J BORE	S1K	S1K																		
PS2.5-15 J BORE		S1K	S1K																	
PS2.5-16 J BORE		S1K	S1K	S1K	S1K															
PS2.5-18 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K											
PS2.5-20 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K										
PS2.5-22 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K									
PS2.5-24 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K								
PS2.5-25 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K							
PS2.5-26 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K						
PS2.5-28 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
PS2.5-30 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K				
PSA2.5-32 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA2.5-35 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-36 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-40 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-45 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-48 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-50 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-55 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			
PSA2.5-60 J BORE				S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K			



* In regard to MC Nylon gears, other materials are available for plastic gears, including Ultra High Molecular Weight Polyethylene (U-PE), which has excellent abrasion resistance and resin conforming to the Plastic Implementation Measure (PIM). A single piece order is acceptable and will be produced as a custom-made gear. Please see Page 26 for more details on quotations and orders.

Stainless Steel Hubs for PSA Now Available !

Standardized sectional stainless steel hubs. They create a secure method for fastening to the shaft.

Knockdown style

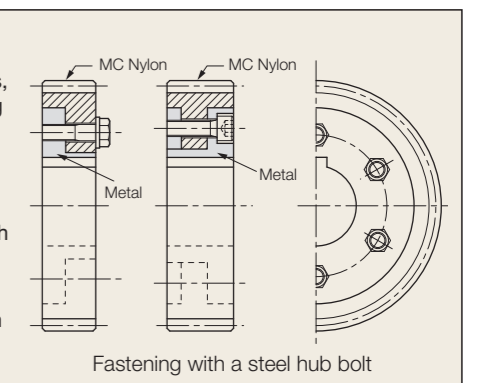
Please see Page 180 for more details.

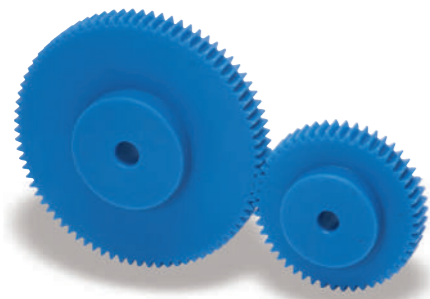
How to attach gears to shafts

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. Since loosening tends to occur in the conditions below, plastic gears are better fastened by using a steel hub.

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

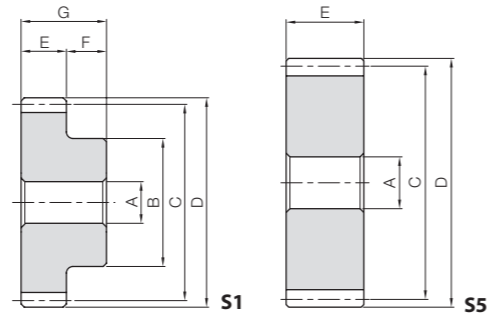
For fastening steel hubs into plastic gears with bolts, see right for various methods.



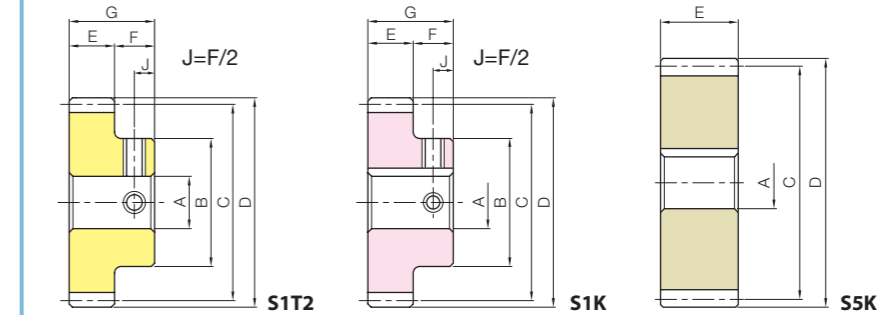


Specifications	
Precision grade	JIS grade N9 (JIS B1702-1: 1998)*
Gear teeth	Standard full depth
Pressure angle	20°
Material	MC901
Heat treatment	—
Tooth hardness	(115 to 120HRR)

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



J Series



To order J Series products, please specify: **Catalog No. + J + BORE.**

Catalog Number	No. of teeth	Shape	Bore		Pitch dia.	Outside dia.	Face width	Hub width	Total length	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash (mm)	Weight (kg)
			A _{H8}	B									
PS3-12	12	S1	12	28	36	42	15	45	7.58	0.77	0~0.52	0.040	
PS3-13	13			30	39	45							
PS3-14	14			32	42	48							
PS3-15	15			36	45	51							
PS3-16	16			38	48	54							
PS3-18	18			40	54	60							
PS3-20	20	S1	14	50	60	66	30	15	16.6	1.69	0~0.54	0.12	
PS3-22	22			54	66	72							
PS3-24	24			58	72	78							
PS3-25	25			60	75	81							
PS3-26	26			65	78	84							
PS3-28	28			70	84	90							
PS3-30	30	75	90	96	27.7	2.82	0.29						
PSA3-32	32	S5	18	96	102	102	—	—	30.1	3.07	0~0.56	0.24	
PSA3-35	35			105	111	111							
PSA3-36	36			108	114	114							
PSA3-40	40			120	126	126							
PSA3-45	45			135	141	141							
PSA3-48	48			144	150	150							
PSA3-50	50	150	156	156	52.8	5.39	0.61						
PSA3-55	55	165	171	171	58.9	6.01	0.74						
PSA3-60	60	180	186	186	65.1	6.64	0.88						

Bore H8	* The product shapes of J Series items are identified by background color.																				
	12	14	15	16	17	18	19	20	22	25	28	30	32	35	40	45	50				
Keyway J _{s9}	4x1.8			5x2.3			6x2.8			8x3.3			10x3.3			12x3.3			14x3.8		
Screw size	M4			M5			M6			M8			—			—					
Catalog Number	M4																				
PS3-12 J BORE	S1T2																				
PS3-13 J BORE	S1K																				
PS3-14 J BORE	S1K	S1K																			
PS3-15 J BORE		S1K	S1K	S1K	S1K																
PS3-16 J BORE		S1K	S1K	S1K	S1K	S1K	S1K														
PS3-18 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K													
PS3-20 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K											
PS3-22 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K										
PS3-24 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K									
PS3-25 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K								
PS3-26 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K							
PS3-28 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K						
PS3-30 J BORE		S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K	S1K					
PSA3-32 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-35 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-36 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-40 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-45 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-48 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-50 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-55 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				
PSA3-60 J BORE									S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K	S5K				

* In regard to MC Nylon gears, other materials are available for plastic gears, including Ultra High Molecular Weight Polyethylene (U-PE), which has excellent abrasion resistance Poly Ether Ether Ketone (PEEK) also has quality properties. A single piece order is acceptable and will be produced as a custom-made gear. Please see Page 26 for more details on quotations and orders.

Stainless Steel Hubs for PSA Now Available!

Standardized sectional stainless steel hubs. They create a secure method for fastening to the shaft.



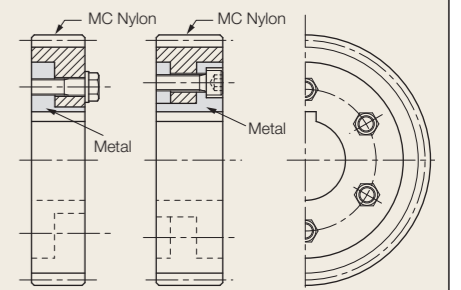
Please see Page 180 for more details.

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. Since loosening tends to occur in the conditions below, plastic gears are better fastened by using 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 right for various methods.



Fastening with a steel hub bolt