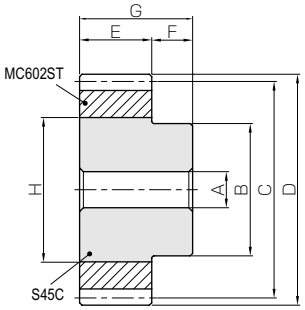
Plastic Spur Gears with Steel Core

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	MC602ST with S45C core
Heat treatment	—
Tooth hardness	(115 ~ 120HRR)
Face width (E)	15
Hub width (F)	12
Total length (G)	27
Screw offset (J)	6

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



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Catalog No.	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Metal core dia.	Allowable torque (N·m)	Allowable torque (kgf·m)	Backlash	Weight
			A_{H7}	B	C	D	H	Bending strength	Bending strength	(mm)	(kg)
NSU1.5-28	28	S1	10	30	42	45	30	3.82	0.39	0~0.38	0.15
NSU1.5-30	30				45	48	30	4.15	0.42		0.15
NSU1.5-32	32			33	48	51	33	4.51	0.46		0.18
NSU1.5-34	34				51	54	33	4.88	0.50	0~0.40	0.19
NSU1.5-35	35				52.5	55.5	36	5.07	0.52		0.20
NSU1.5-36	36				54	57	36	5.26	0.54		0.21
NSU1.5-40	40			40	60	63	45	6.00	0.61		0.31
NSU1.5-45	45				67.5	70.5	45	6.94	0.71		0.33
NSU1.5-48	48				72	75	45	7.53	0.77		0.33
NSU1.5-50	50		12		75	78	45	7.92	0.81		0.33
NSU1.5-56	56			50	84	87	55	9.09	0.93		0.50
NSU1.5-60	60				90	93	55	9.89	1.01		0.51
NSU1.5-68	68				102	105	67	11.3	1.15		0.66
NSU1.5-70	70				105	108	70	11.7	1.19	0~0.42	0.70
NSU1.5-80	80			60	120	123	85	13.5	1.38		1.01
NSU1.5-90	90				135	138	100	15.4	1.57		1.29

[Caution on Product Characteristics]

① Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon gears), teeth diameter and backlash. Please see the section "Design of Plastic Gears" in separate technical reference book.
② The allowable torques shown in the table are calculated values according to the assumed usage conditions. Please see Page 31 for more details.
③ When the core O.D is the same as the hub diameter, you may see some serration on the hub. There is no effect on the strength of the gear.
④ Without lubrication, using plastic gears in pairs may generate heat and dilation. It is recommended to mate them with steel gears.
⑤ 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.

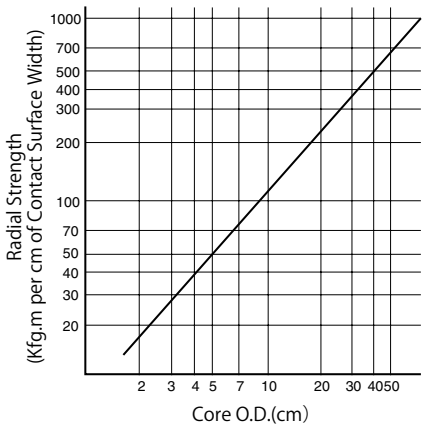
[Caution on Secondary Operations]

①Please read "Caution on Performing Secondary Operations" (Page 32) when performing modifications and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK's system for quick modification of KHK stock gears is also available.
② Even though the holding strength at the material interface is designed to be stronger than the teeth, a secondary operation may weaken the holding strength.
③ Plastic gears are susceptible to the effects of temperature and moisture. Dimensional changes may occur while performing secondary operations and during post-machining operations.

Definition of Holding Strength and Safety Factor

① The holding strength between the metal core and the molded material is a function of the contact area. The relationship between the core outside diameter and the radial strength (torque) is shown on the left, while the relationship between the core diameter and the resistant thrust force is shown on the right.

Relationship between radial strength and core diameter



Relationship between resistant thrust force and core diameter