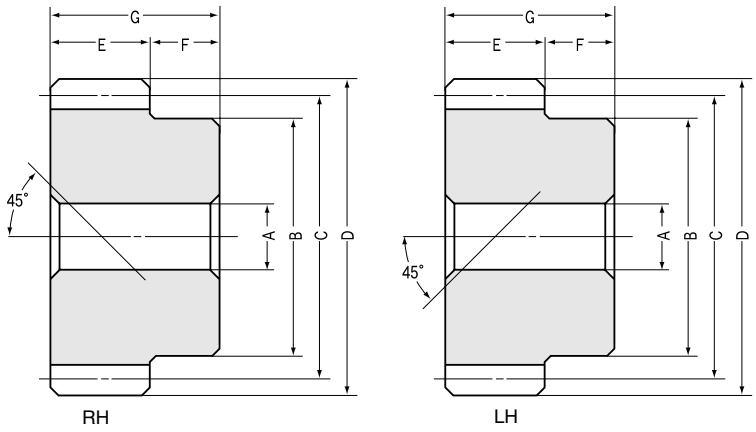
PN Plastic Screw Gears Modules 1.5~3



S1 Shape

■ Module 1.5

Catalog No.	Hand of helix	Module	No. of teeth	Bore	Hub dia.	Pitch dia.	Outside dia.	Face width	Hub width	Total length
		m	z	A	B	C	D	E	F	G
PN1.5-10R **PN1.5-10L**	R L	1.5	10	6	16	21.21	24.21	15	10	25
PN1.5-13R **PN1.5-13L**	R L	1.5	13	8	23	27.58	30.58	15	10	25
PN1.5-15R **PN1.5-15L**	R L	1.5	15	8	25	31.82	34.82	15	10	25
PN1.5-20R **PN1.5-20L**	R L	1.5	20	10	30	42.43	45.43	15	10	25

■ Module 2

PN2 -10R **PN2 -10L**	R L	2	10	10	22	28.28	32.28	20	15	35
PN2 -13R **PN2 -13L**	R L	2	13	10	30	36.77	40.77	20	15	35
PN2 -15R **PN2 -15L**	R L	2	15	10	35	42.43	46.43	20	15	35
PN2 -20R **PN2 -20L**	R L	2	20	12	45	56.57	60.57	20	15	35

■ Module 2.5

PN2.5-10R **PN2.5-10L**	R L	2.5	10	10	26	35.36	40.36	22	16	38
PN2.5-13R **PN2.5-13L**	R L	2.5	13	12	35	45.96	50.96	22	16	38
PN2.5-15R **PN2.5-15L**	R L	2.5	15	12	40	53.03	58.03	22	16	38
PN2.5-20R **PN2.5-20L**	R L	2.5	20	12	60	70.71	75.71	22	16	38

■ Module 3

PN3 -10R **PN3 -10L**	R L	3	10	12	34	42.43	48.43	25	18	43
PN3 -13R **PN3 -13L**	R L	3	13	15	45	55.15	61.15	25	18	43
PN3 -15R **PN3 -15L**	R L	3	15	15	50	63.64	69.64	25	18	43
PN3 -20R **PN3 -20L**	R L	3	20	15	60	84.85	90.85	25	18	43

CAUTION: For skewed shaft applications, RH and RH or LH and LH are meshed to make up a set of screw gears or crossed-helical gears. For parallel shaft applications, mesh opposite hands of helical gear sets. See the Selection Hints on page 278.

CAUTION: The quality of plastic gears (MC Nylon) can be affected by the temperature and humidity. Please see page 32 on “Characteristics of Plastic Gears” for additional information.

Specifications

Precision grade	JIS N9 grade(JIS B1701-1998) OLD JIS grade 5 (JIS B 1702-1976)	Material	MC901
Reference section of gear	Normal plane	Surface treatment	—
Gear teeth	Standard full depth	Tooth surface finish	Cut
Normal pressure angle	20°	Datum reference surface for gear cutting	Bore
Helix angle	45°	Secondary Operations	Possible

Shape	Allowable torque (N-m) NOTE 1		Allowable torque (kgf-m)		Backlash (mm) NOTE 2	Weight (kgf)	Catalog No.
	Bending strength	Surface durability	Bending strength	Surface durability			
S1	—	0.29	—	(0.03)	0.14 ~ 0.3	0.006	PN1.5-10R PN1.5-10L
S1	—	0.62	—	(0.06)	0.14 ~ 0.3	0.012	PN1.5-13R PN1.5-13L
S1	—	0.93	—	(0.1)	0.14 ~ 0.3	0.016	PN1.5-15R PN1.5-15L
S1	—	2.14	—	(0.22)	0.14 ~ 0.3	0.026	PN1.5-20R PN1.5-20L
S1	—	0.66	—	(0.07)	0.18 ~ 0.34	0.016	PN2 -10R PN2 -10L
S1	—	1.42	—	(0.14)	0.18 ~ 0.34	0.031	PN2 -13R PN2 -13L
S1	—	2.14	—	(0.22)	0.18 ~ 0.34	0.043	PN2 -15R PN2 -15L
S1	—	4.84	—	(0.49)	0.2 ~ 0.36	0.075	PN2 -20R PN2 -20L
S1	—	1.26	—	(0.13)	0.2 ~ 0.36	0.026	PN2.5-10R PN2.5-10L
S1	—	2.69	—	(0.27)	0.2 ~ 0.36	0.05	PN2.5-13R PN2.5-13L
S1	—	4.03	—	(0.41)	0.22 ~ 0.38	0.068	PN2.5-15R PN2.5-15L
S1	—	9.07	—	(0.92)	0.22 ~ 0.38	0.14	PN2.5-20R PN2.5-20L
S1	—	2.14	—	(0.22)	0.28 ~ 0.44	0.05	PN3 -10R PN3 -10L
S1	—	4.51	—	(0.46)	0.3 ~ 0.46	0.09	PN3 -13R PN3 -13L
S1	—	6.75	—	(0.69)	0.3 ~ 0.46	0.12	PN3 -15R PN3 -15L
S1	—	15.04	—	(1.53)	0.3 ~ 0.46	0.19	PN3 -20R PN3 -20L

NOTE 1: The allowable torques shown in the table are calculated from the Niemann formula. Please see the "Selection Hints" (page 278) for further details.

NOTE 2: The backlash values shown in the table are the theoretical values in the normal direction of a pair of identical gears in mesh.