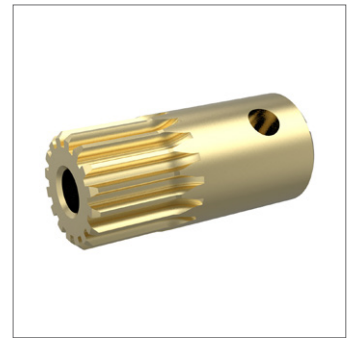
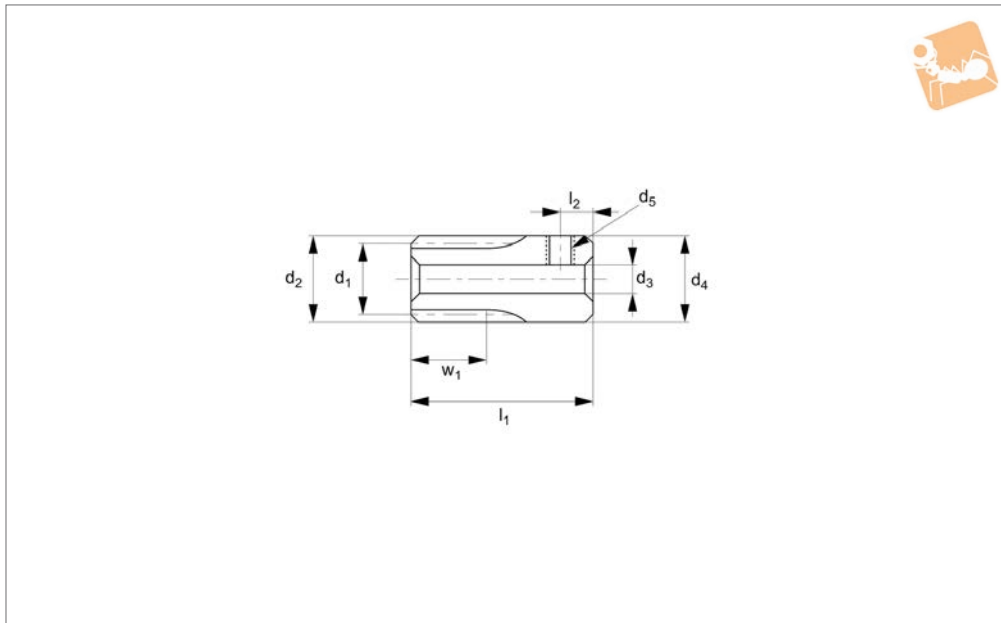




Spur Gears - Module 0.3

brass - 14-18 teeth



R5100

STANDARD SPUR GEARS

Material

Brass (C3604B).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

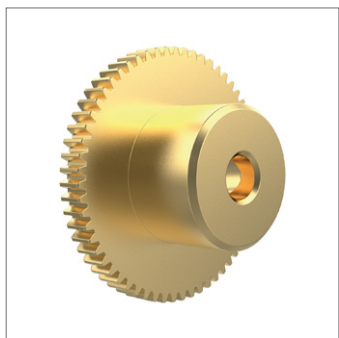
gears = 0,006 - 0,018 mm.

Tips

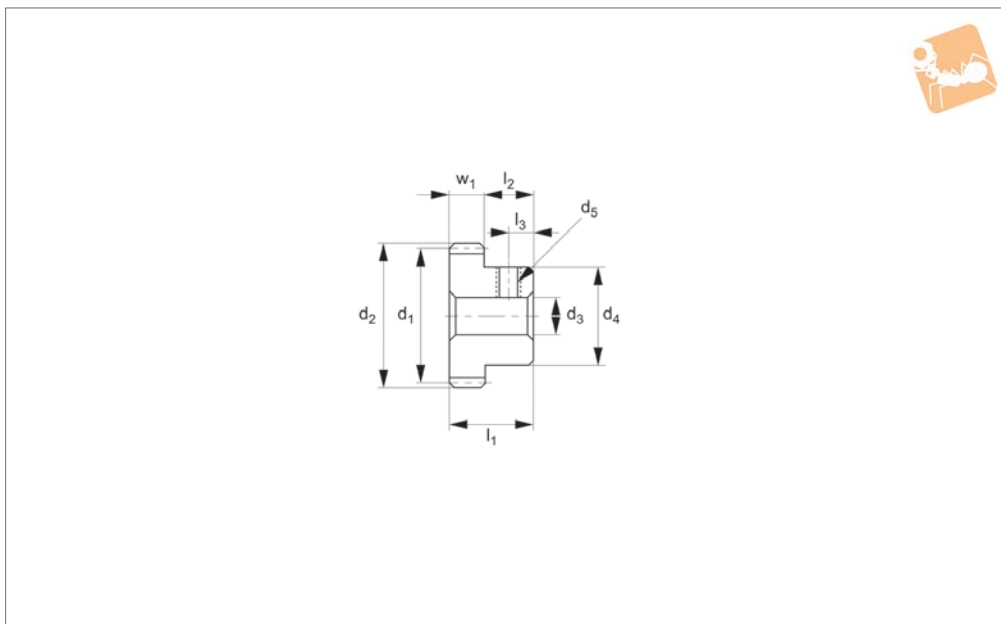
For module 0.3 brass gears with 20-120 teeth see R5101. Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a

safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	Thread d ₅	l ₂	Torque Nm max.	Weight g
R5100.030-014	m 0.3	14	4.2	4.8	4	2	5.0	12	M 1,6	2.5	0.031	1.5
R5100.030-015	m 0.3	15	4.5	5.1	4	2	5.5	12	M 1,6	2.5	0.034	1.8
R5100.030-016	m 0.3	16	4.8	5.4	4	2	5.5	12	M 1,6	2.5	0.038	1.9
R5100.030-018	m 0.3	18	5.4	6.0	4	2	6.0	12	M 2,0	2.5	0.046	2.3



R5101



Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,006 - 0,018mm.

Tips

For module 0.3 brass gears with 14-18 teeth see R5100. Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a

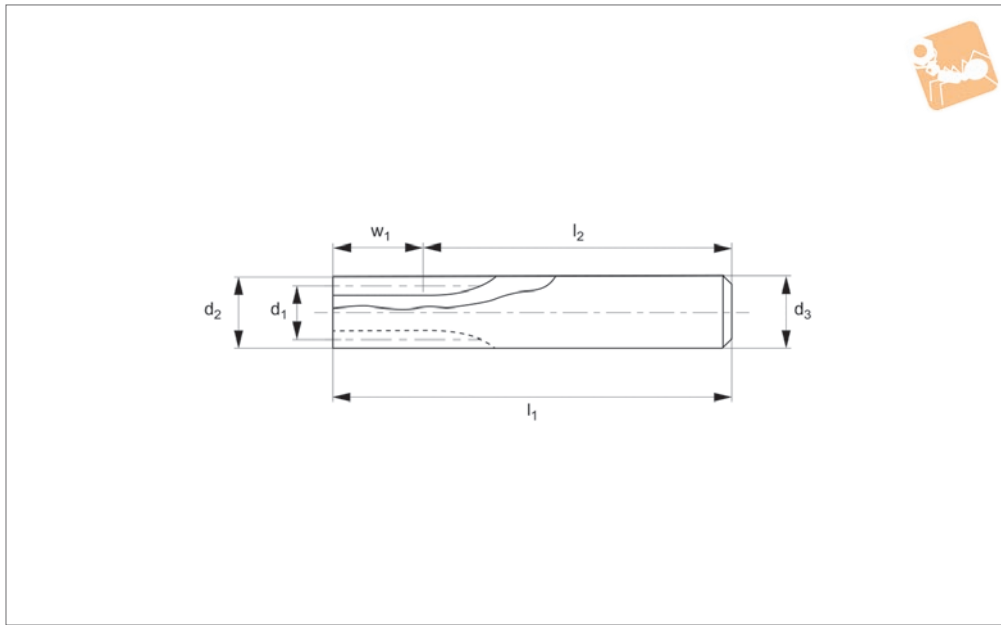
safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	Thread d ₅	l ₂	Torque Nm max.	l ₃	Weight g
R5101.030-020	m 0.3	20	6.0	6.6	3.2	2	5	8	M 1,6	4.8	0.043	2.5	1.3
R5101.030-024	m 0.3	24	7.2	7.8	3.2	2	6	8	M 2	4.8	0.055	2.5	2.0
R5101.030-025	m 0.3	25	7.5	8.1	3.2	2	6	8	M 2	4.8	0.059	2.5	2.1
R5101.030-028	m 0.3	28	8.4	9.0	3.2	2	7	8	M 4	4.8	0.069	2.5	2.8
R5101.030-030	m 0.3	30	9.0	9.6	3.2	2	8	8	M 2	4.8	0.075	2.5	3.5
R5101.030-032	m 0.3	32	9.6	10.2	2.0	2	8	8	M 2	6.0	0.052	2.5	3.5
R5101.030-035	m 0.3	35	10.5	11.1	2.0	2	8	8	M 2	6.0	0.058	3.0	3.8
R5101.030-036	m 0.3	36	10.8	11.4	2.0	3	9	8	M 3	6.0	0.060	3.0	4.2
R5101.030-040	m 0.3	40	12.0	12.6	2.0	3	10	8	M 3	6.0	0.069	3.0	5.3
R5101.030-045	m 0.3	45	13.5	14.1	2.0	3	10	8	M 3	6.0	0.080	3.0	5.8
R5101.030-048	m 0.3	48	14.4	15.0	2.0	3	10	8	M 3	6.0	0.087	3.0	6.1
R5101.030-050	m 0.3	50	15.0	15.6	2.0	3	10	8	M 3	6.0	0.092	3.0	6.4
R5101.030-056	m 0.3	56	16.8	17.4	2.0	3	10	8	M 3	6.0	0.105	3.0	7.1
R5101.030-060	m 0.3	60	18.0	18.6	2.0	3	10	8	M 3	6.0	0.115	3.0	7.7
R5101.030-064	m 0.3	64	19.2	19.8	2.0	3	10	8	M 3	6.0	0.123	3.0	8.3
R5101.030-066	m 0.3	66	19.8	20.4	2.0	3	10	8	M 3	6.0	0.128	3.0	8.6
R5101.030-070	m 0.3	70	21.0	21.6	2.0	3	10	8	M 3	6.0	0.137	3.0	9.3
R5101.030-072	m 0.3	72	21.6	22.2	2.0	3	10	8	M 3	6.0	0.141	3.0	9.6
R5101.030-075	m 0.3	75	22.5	23.1	2.0	3	10	8	M 3	6.0	0.149	3.0	10.1
R5101.030-080	m 0.3	80	24.0	24.6	2.0	3	10	8	M 3	6.0	0.160	3.0	11.1
R5101.030-090	m 0.3	90	27.0	27.6	2.0	3	10	8	M 3	6.0	0.183	3.0	13.1
R5101.030-096	m 0.3	96	28.8	29.4	2.0	3	10	8	M 3	6.0	0.197	3.0	14.4
R5101.030-100	m 0.3	100	30.0	30.6	2.0	3	10	8	M 3	6.0	0.206	3.0	15.4
R5101.030-108	m 0.3	108	32.4	33.0	2.0	3	10	8	M 3	6.0	0.225	3.0	17.4
R5101.030-120	m 0.3	120	36.0	36.6	2.0	3	10	8	M 3	6.0	0.253	3.0	20.7



Spur Gears - Module 0.5

stainless steel - 10-15 teeth



R5104

STANDARD SPUR GEARS

Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,01 - 0,03mm.

Tips

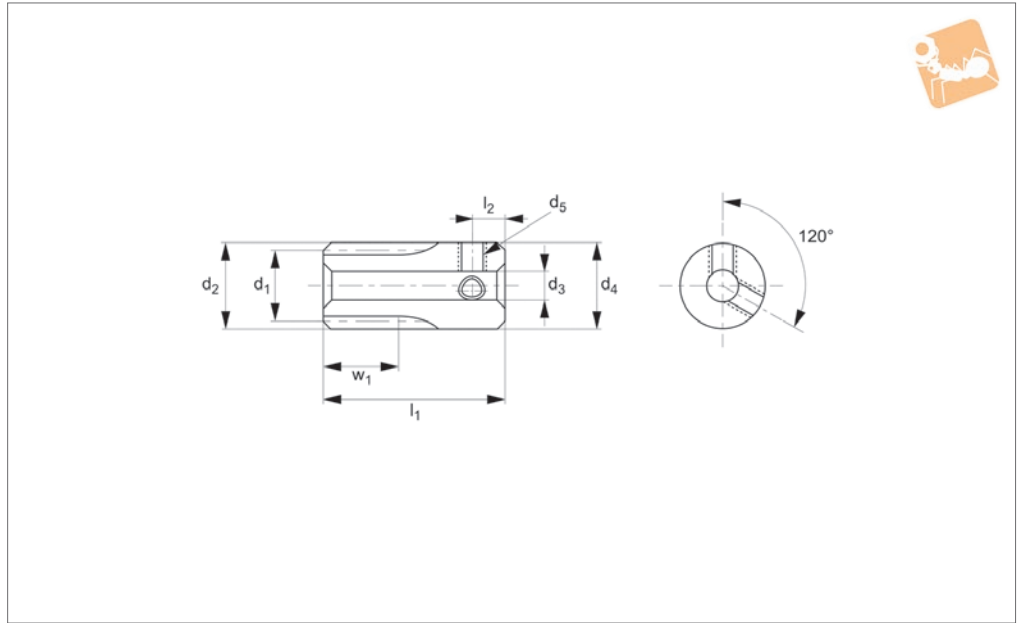
For module 0,5 stainless gears with 16-120 teeth see R5105, R5106 and R5108. Max. allowable torque (Nm) is based on standard operating conditions (see technical

pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	Torque Nm max.	Weight g
R5104.050-010	m 0.5	10	5.0	6.0	10	6.0	55	45	0.29	11.7
R5104.050-012	m 0.5	12	6.0	7.0	10	7.0	55	45	0.40	16.0
R5104.050-014	m 0.5	14	7.0	8.0	10	8.0	55	45	0.53	21.0
R5104.050-015	m 0.5	15	7.5	8.5	10	8.5	55	45	0.59	23.8



R5105



Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,01 - 0,03mm.

Tips

Module 0.5 for gears with 10-15 teeth see R5104. For long spur gears with 16-20 teeth see R5106.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5105.050-016	m 0.5	16	8.0	9.0	8	4	9.0	18	3	2xM 3	0.53	6.2
R5105.050-018	m 0.5	18	9.0	10.0	8	4	10.0	18	3	2xM 3	0.63	8.2
R5105.050-020	m 0.5	20	10.0	11.0	8	4	11.0	18	3	2xM 3	0.74	10.4
R5105.050-024	m 0.5	24	12.0	13.0	8	5	13.0	18	3	2xM 3	0.97	14.5
R5105.050-025	m 0.5	25	12.5	13.5	8	5	13.5	18	3	2xM 3	1.02	15.9
R5105.050-028	m 0.5	28	14.0	15.0	8	5	15.0	18	3	2xM 3	1.20	20.5
R5105.050-030	m 0.5	30	15.0	16.0	8	6	16.0	18	3	2xM 3	1.32	22.7

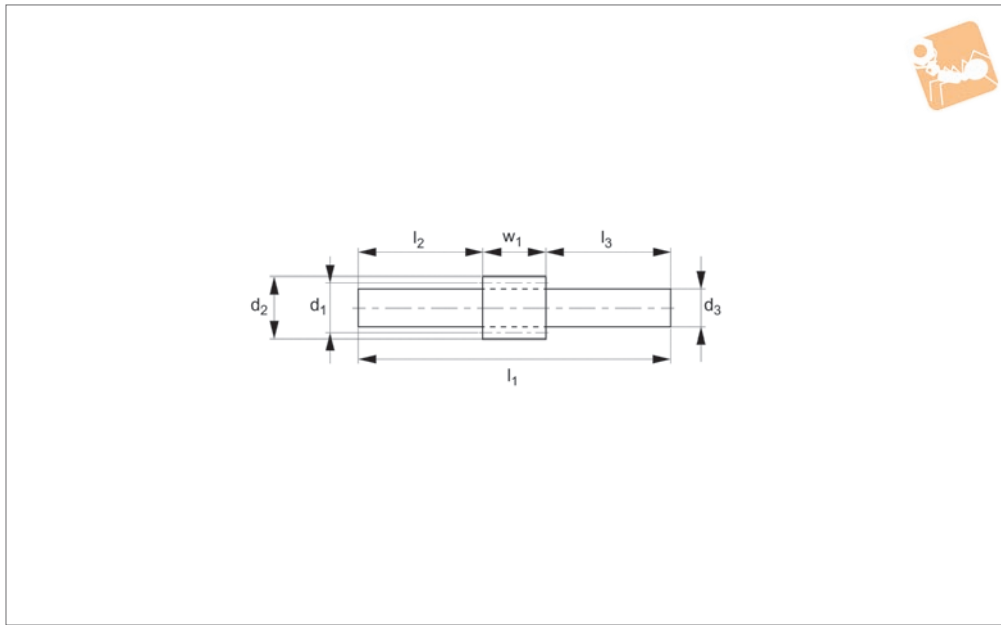


Spur Gears - Module 0.5

stainless steel - 16-20 teeth



Standard Spur Gears



R5106

STANDARD SPUR GEARS

Material

Stainless steel (AISI 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,01 - 0,03mm.

Tips

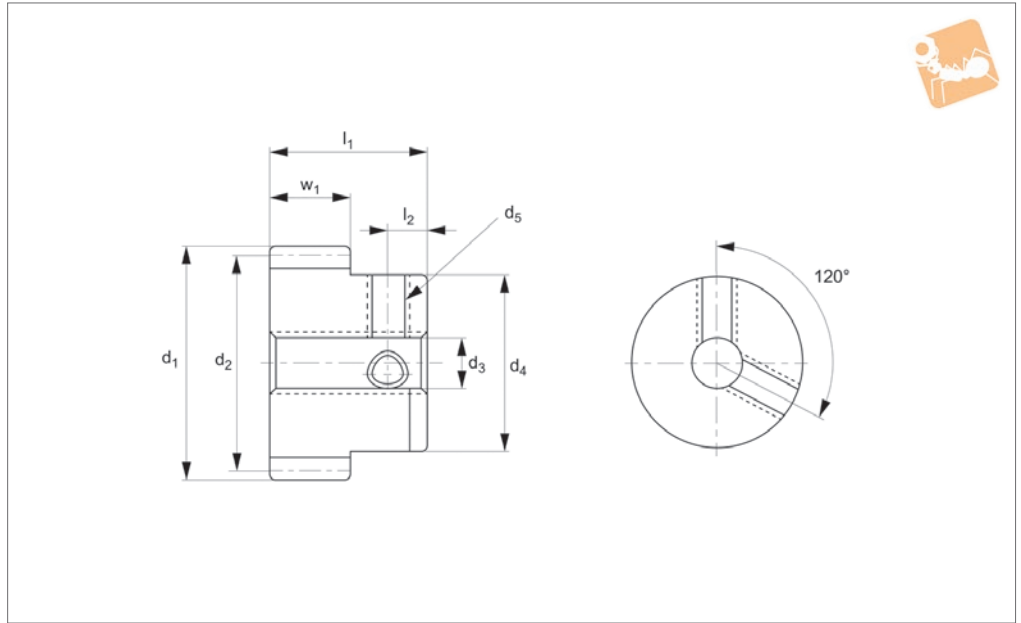
Module 0.5 for gears with 10-15 teeth see R5104, for gears with 16-30 teeth see R5105.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	l ₃	Torque Nm max.	Weight g
R5106.050-016	m 0.5	16	8.0	9.0	8	5.0	80	22	50	0.53	14.4
R5106.050-018	m 0.5	18	9.0	10.0	8	6.0	80	22	50	0.63	20.2
R5106.050-020	m 0.5	20	10.0	11.0	8	6.0	80	22	50	0.74	21.1



R5108



Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,01 - 0,03 mm.

Tips

Module 0.5 for gears with 10-15 teeth see R5104,
for gears with 16-30 teeth see R5105,
for gears with 16-20 teeth see R5106- long spur gear.
Max. allowable torque (Nm) is based on

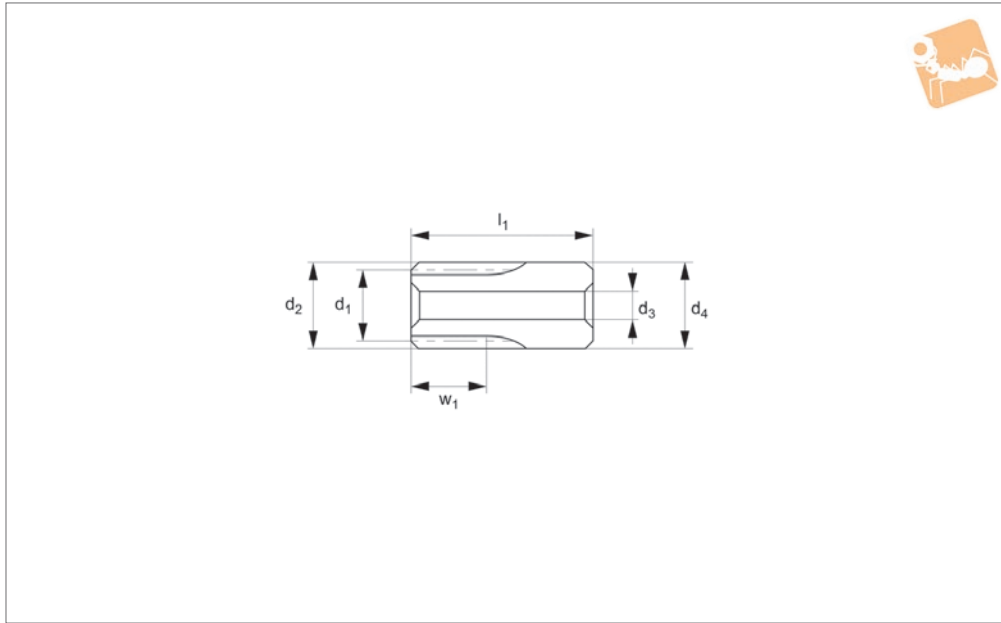
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5108.050-032	m 0.5	32	16.0	17.0	5	6	12	13	4	2xM 3	0.90	12.0
R5108.050-036	m 0.5	36	18.0	19.0	5	6	12	13	4	2xM 3	1.05	14.1
R5108.050-040	m 0.5	40	20.0	21.0	5	6	15	13	4	2xM 4	1.20	20.0
R5108.050-045	m 0.5	45	22.5	23.5	5	6	15	13	4	2xM 4	1.39	23.3
R5108.050-048	m 0.5	48	24.0	25.0	5	6	15	13	4	2xM 4	1.51	25.5
R5108.050-050	m 0.5	50	25.0	26.0	5	6	15	13	4	2xM 4	1.59	27.0
R5108.050-054	m 0.5	54	27.0	28.0	5	6	15	13	4	2xM 4	1.74	30.3
R5108.050-056	m 0.5	56	28.0	29.0	5	6	15	13	4	2xM 4	1.82	32.0
R5108.050-060	m 0.5	60	30.0	31.0	5	8	18	13	4	2xM 4	1.98	38.2
R5108.050-064	m 0.5	64	32.0	33.0	5	8	18	13	4	2xM 4	2.14	42.0
R5108.050-070	m 0.5	70	35.0	36.0	5	8	18	13	4	2xM 4	2.38	48.3
R5108.050-072	m 0.5	72	36.0	37.0	5	8	18	13	4	2xM 4	2.46	50.5
R5108.050-075	m 0.5	75	37.5	38.5	5	8	18	13	4	2xM 4	2.58	53.9
R5108.050-080	m 0.5	80	40.0	41.0	5	10	22	13	4	2xM 5	2.78	64.3
R5108.050-090	m 0.5	90	45.0	46.0	5	10	22	13	4	2xM 5	3.18	77.5
R5108.050-100	m 0.5	100	50.0	51.0	5	10	25	13	4	2xM 5	3.58	98.9
R5108.050-120	m 0.5	120	60.0	61.0	5	10	25	13	4	2xM 5	4.39	133.2



Spur Gears - Module 0.5 - Plastic

white polyacetal - 14-18 teeth



R5109

STANDARD SPUR GEARS

Material

White polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

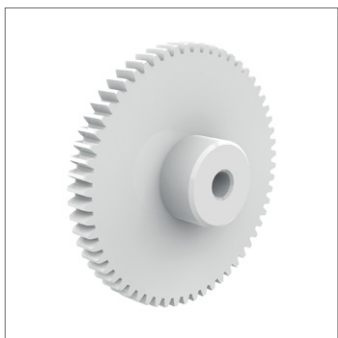
gears = 0,01 - 0,03mm.

Tips

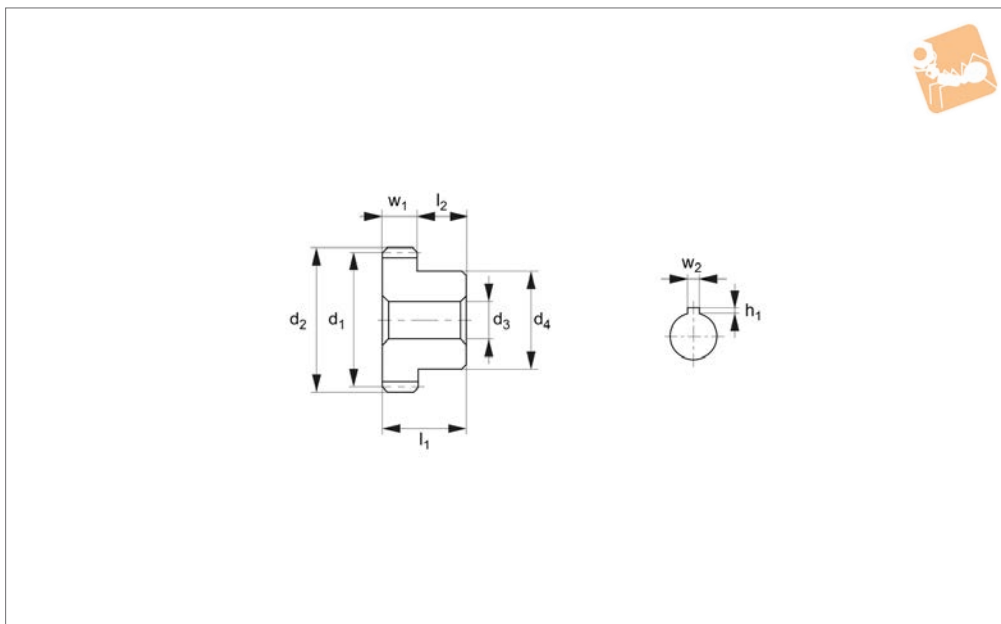
Module 0.5 for gears with 20-120 teeth see R5111.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	Torque Nm max.	Weight g
R5109.050-014	m 0.5	14	7.0	8.0	8	3	9	18	0.214	1.2
R5109.050-015	m 0.5	15	7.5	8.5	8	3	9	18	0.229	1.2
R5109.050-016	m 0.5	16	8.0	9.0	8	3	9	18	0.244	1.3
R5109.050-018	m 0.5	18	9.0	10.0	8	3	10	18	0.275	1.7



R5111



Material

White polyacetal, machined. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling gears= 0,01- 0,03 mm.

Tips

Module 0.5 for gears with 14-18 teeth see R5109. Max. allowable torque (Nm) is

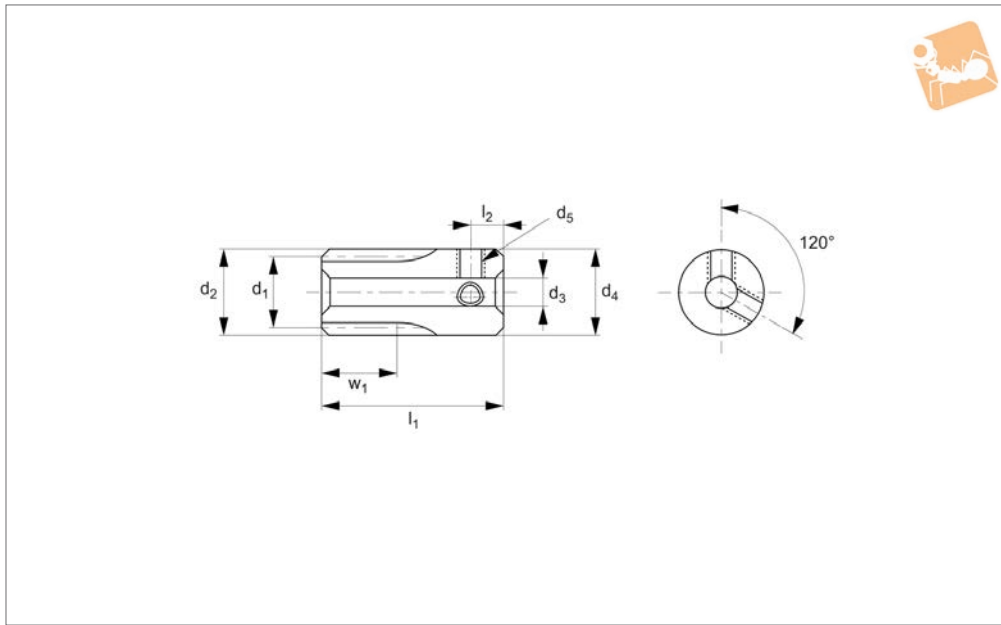
based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5111.050-020	m 0.5	20	10.0	11.0	3	3	8	8	5	0.11	0.6
R5111.050-024	m 0.5	24	12.0	13.0	3	3	8	8	5	0.17	0.8
R5111.050-025	m 0.5	25	12.5	13.5	3	3	8	8	5	0.17	0.8
R5111.050-028	m 0.5	28	14.0	15.0	3	3	8	8	5	0.19	0.9
R5111.050-030	m 0.5	30	15.0	16.0	3	3	8	8	5	0.21	1.0
R5111.050-032	m 0.5	32	16.0	17.0	3	3	8	8	5	0.22	1.1
R5111.050-036	m 0.5	36	18.0	19.0	3	3	8	8	5	0.25	1.4
R5111.050-040	m 0.5	40	20.0	21.0	3	3	10	8	5	0.28	1.8
R5111.050-045	m 0.5	45	22.5	23.5	3	3	10	8	5	0.31	2.2
R5111.050-050	m 0.5	50	25.0	26.0	3	3	10	8	5	0.35	2.6
R5111.050-056	m 0.5	56	28.0	29.0	3	3	10	8	5	0.39	3.1
R5111.050-060	m 0.5	60	30.0	31.0	3	3	10	8	5	0.42	3.4
R5111.050-064	m 0.5	64	32.0	33.0	3	3	10	8	5	0.44	3.9
R5111.050-070	m 0.5	70	35.0	36.0	3	4	12	8	5	0.49	4.7
R5111.050-072	m 0.5	72	36.0	37.0	3	4	12	8	5	0.50	5.0
R5111.050-080	m 0.5	80	40.0	41.0	3	4	12	8	5	0.55	6.0
R5111.050-090	m 0.5	90	45.0	46.0	3	5	14	8	5	0.62	7.6
R5111.050-100	m 0.5	100	50.0	51.0	3	5	14	8	5	0.69	9.2
R5111.050-120	m 0.5	120	60.0	61.0	3	5	14	8	5	0.83	12.9



Spur Gears - Module 0.5 - Plastic

white - set screw - 14-18 teeth



R5112

STANDARD SPUR GEARS

Material

White polyacetal, machined. Accuracy to JIS B 1702-1 (ISO) class 9-10. Steel set screw.

Technical Notes

20° pressure angle, full depth tooth.

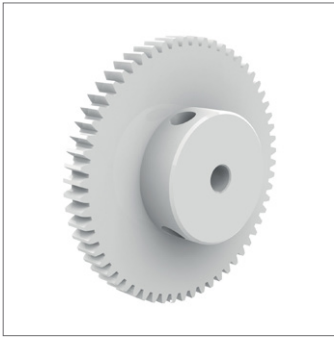
Amount of backlash when assembling gears = 0,01 - 0,03mm.

Tips

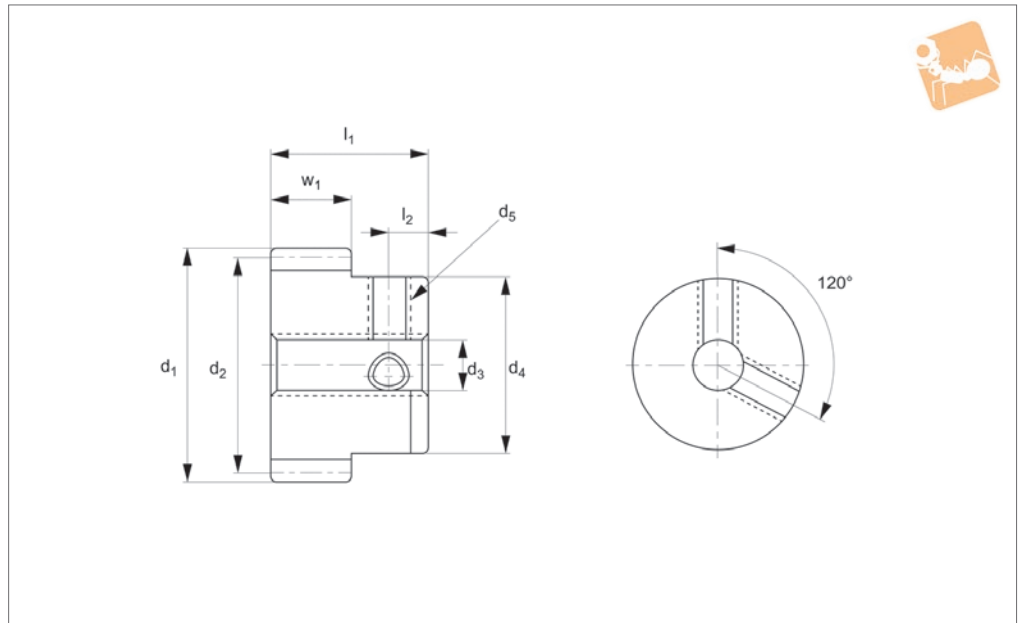
Module 0.5 for gears with 20-120 teeth see R5113. Max. allowable torque (Nm) is based on standard operating conditions

(see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5112.050-014	m 0.5	14	7.0	8.0	8	3	9	18	3	2xM 3	0.214	1.15
R5112.050-015	m 0.5	15	7.5	8.5	8	3	9	18	3	2xM 3	0.229	1.22
R5112.050-016	m 0.5	16	8.0	9.0	8	3	9	18	3	2xM 3	0.244	1.29
R5112.050-018	m 0.5	18	9.0	10.0	8	3	10	18	3	2xM 3	0.275	1.65



R5113



Material

White polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.
Steel set screw.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling gears = 0,01 - 0,03mm.

Tips

Module 0.5 for gears with 20-120 teeth see R5112.
Max. allowable torque (Nm) is based on

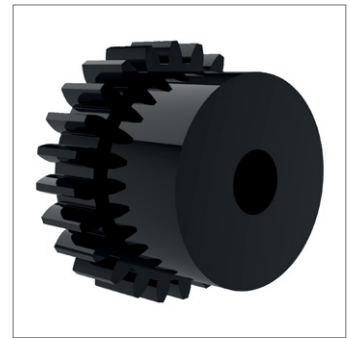
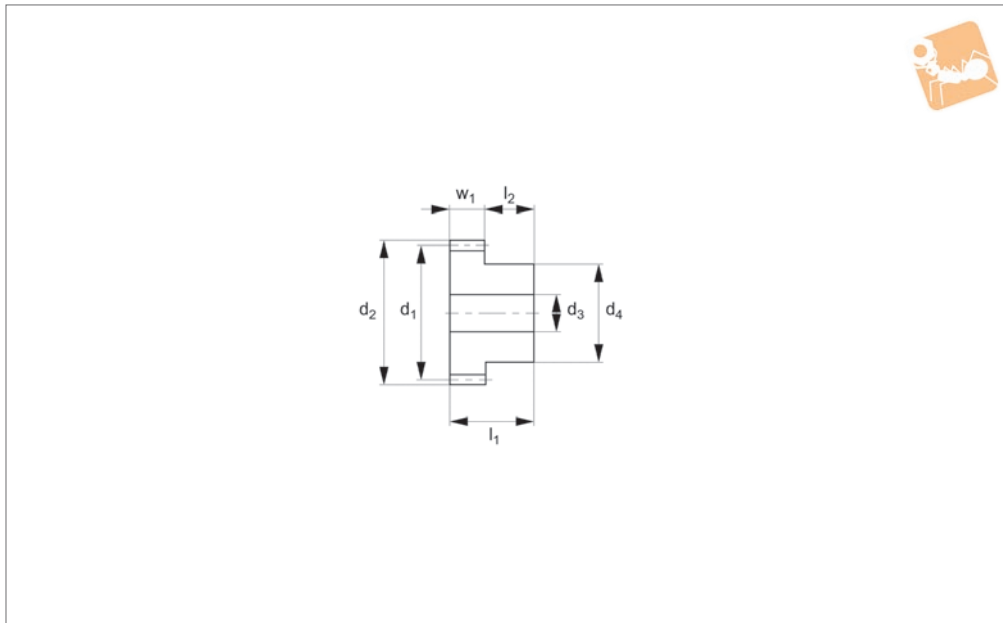
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5113.050-020	m 0.5	20	10.0	11.0	3	3	8	8	3	2xM 3	0.11	0.57
R5113.050-024	m 0.5	24	12.0	13.0	3	3	10	8	3	2xM 3	0.17	0.90
R5113.050-028	m 0.5	25	12.5	13.5	3	3	10	8	3	2xM 3	0.17	0.94
R5113.050-030	m 0.5	28	14.0	15.0	3	3	12	8	3	2xM 3	0.19	1.30
R5113.050-032	m 0.5	30	15.0	16.0	3	3	12	8	3	2xM 3	0.21	1.39
R5113.050-034	m 0.5	32	16.0	17.0	3	3	14	8	3	2xM 3	0.22	1.77
R5113.050-036	m 0.5	36	18.0	19.0	3	3	15	8	3	2xM 3	0.25	2.15
R5113.050-040	m 0.5	40	20.0	21.0	3	3	15	8	3	2xM 3	0.28	2.40
R5113.050-045	m 0.5	45	22.5	23.5	3	3	15	8	3	2xM 3	0.31	2.75
R5113.050-050	m 0.5	50	25.0	26.0	3	3	15	8	3	2xM 3	0.35	3.15
R5113.050-056	m 0.5	56	28.0	29.0	3	3	15	8	3	2xM 3	0.39	3.67
R5113.050-060	m 0.5	60	30.0	31.0	3	3	15	8	3	2xM 3	0.42	4.06
R5113.050-064	m 0.5	64	32.0	33.0	3	3	15	8	3	2xM 3	0.44	4.47
R5113.050-070	m 0.5	70	35.0	36.0	3	4	16	8	3	2xM 3	0.49	5.25
R5113.050-072	m 0.5	72	36.0	37.0	3	4	16	8	3	2xM 3	0.50	5.48
R5113.050-080	m 0.5	80	40.0	41.0	3	4	16	8	3	2xM 3	0.55	6.49
R5113.050-090	m 0.5	90	45.0	46.0	3	5	18	8	3	2xM 3	0.62	8.20
R5113.050-100	m 0.5	100	50.0	51.0	3	5	18	8	3	2xM 3	0.69	9.77
R5113.050-120	m 0.5	120	60.0	61.0	3	5	18	8	3	2xM 3	0.83	13.43



Spur Gears - Module 0.5 - Plastic

black - 20-30 teeth



R5115

STANDARD SPUR GEARS

Material

Black polyacetal, injection molded.
Accuracy to JIS B 1702-1 (ISO) class 11.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

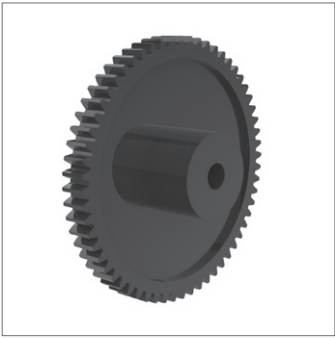
gears= 0,01- 0,03 mm.

Tips

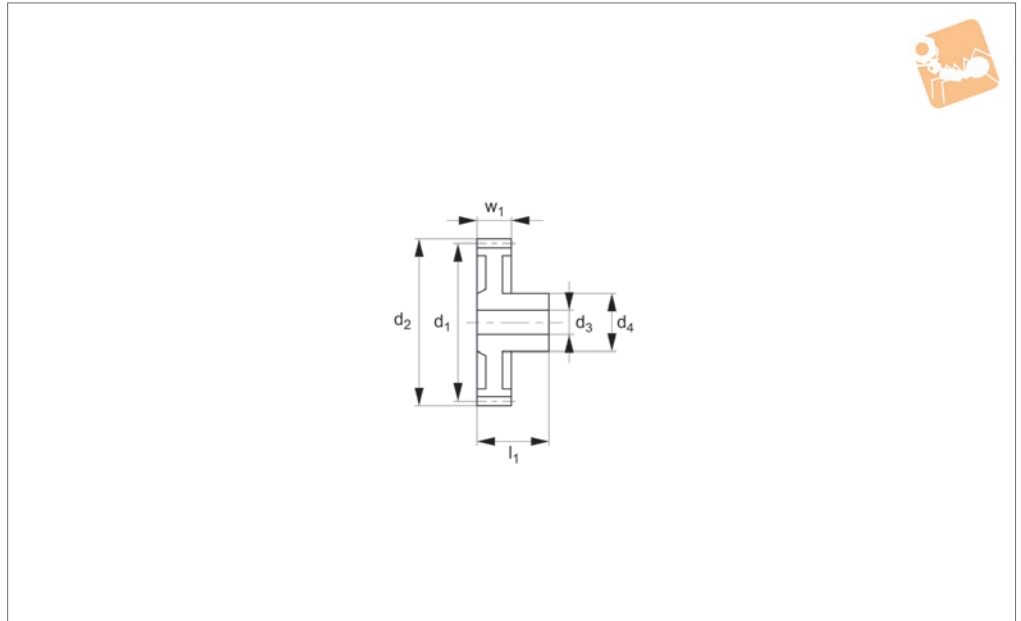
Module 0.5 for gears with 40-100 teeth see R5116. Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor

of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.e, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5115.050-020	m 0.5	20	10	11	4	3	8	8	4	0.176	0.9
R5115.050-024	m 0.5	24	12	13	3	3	10	8	5	0.158	1.0
R5115.050-030	m 0.5	30	15	16	3	3	10	8	5	0.198	1.2



R5116



Material

Black polyacetal, injection molded.
Accuracy to JIS B 1702-1 (ISO) class 11.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,01 - 0,03mm.

Tips

Module 0.5 for gears with 20-30 teeth see R5115.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

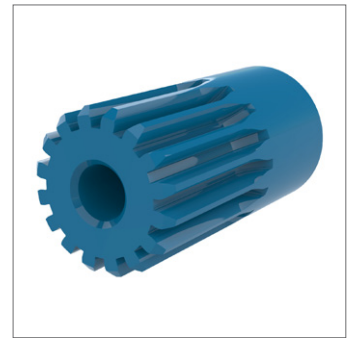
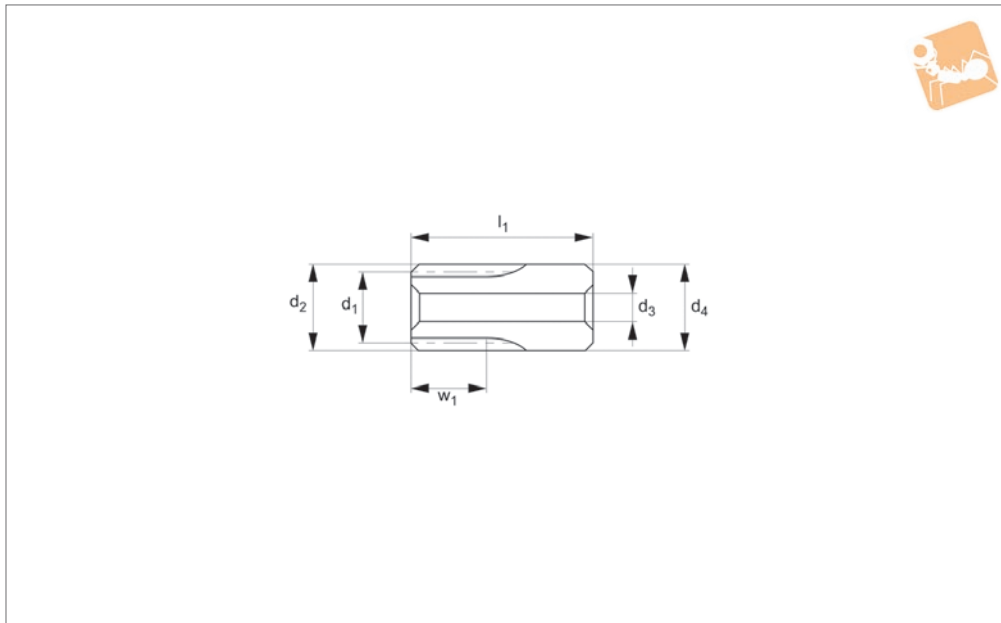
nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H9	d_4	l_1	l_2	Torque Nm max.	Weight g
R5116.050-040	m 0.5	40	20	21	3	3	10	8	8	0.26	1.5
R5116.050-050	m 0.5	50	25	26	3	3	10	8	8	0.33	2.0
R5116.050-060	m 0.5	60	30	31	3	3	10	8	8	0.39	2.7
R5116.050-080	m 0.5	80	40	41	3	3	10	8	8	0.53	4.4
R5116.050-100	m 0.5	100	50	51	3	3	10	8	8	0.66	6.6



Spur Gears - Module 0.5 - Plastic

blue polyacetal - 14-18 teeth



R5117

STANDARD SPUR GEARS

Material

Blue polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears= 0,01- 0,03 mm.
Blue polyacetal machined gears are

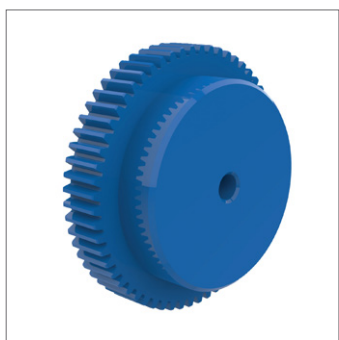
suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

Tips

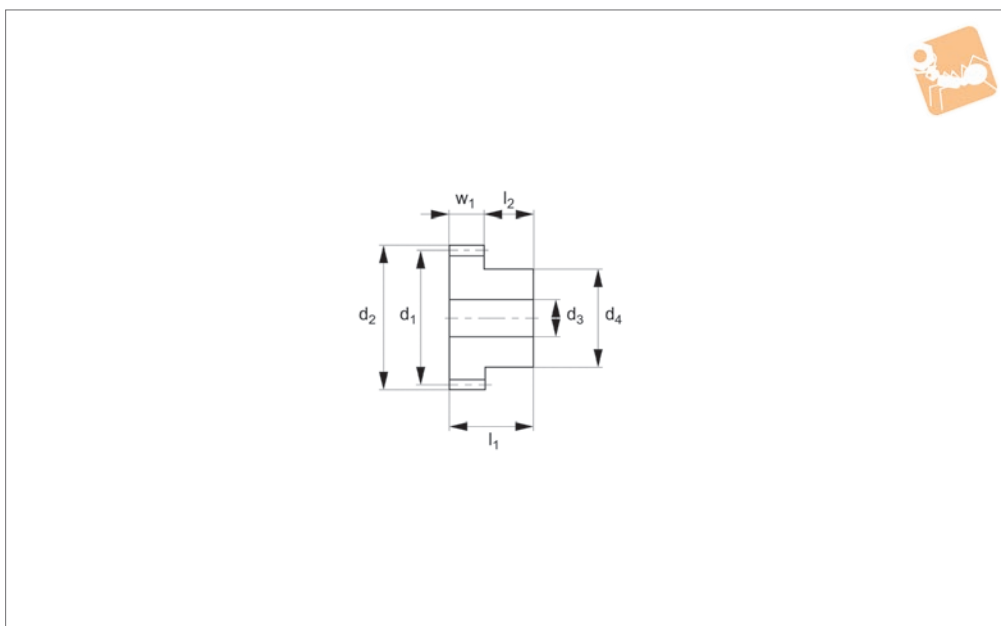
Module 0.5 for gears with 20-40 teeth see R5120.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	Torque Nm max.	Weight g
R5117.050-014	m 0.5	14	7.0	8.0	8	3	9	18	0.21	1.1
R5117.050-015	m 0.5	15	7.5	8.5	8	3	9	18	0.23	1.2
R5117.050-016	m 0.5	16	8.0	9.0	8	3	9	18	0.24	1.3
R5117.050-018	m 0.5	18	9.0	10.0	8	3	10	18	0.28	1.6



R5120



Material

Blue polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9 - 10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears= 0,01 - 0,03mm.
Blue polyacetal machined gears are

suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

Tips

Module 0.5 for gears with 14-18 teeth see R5117.

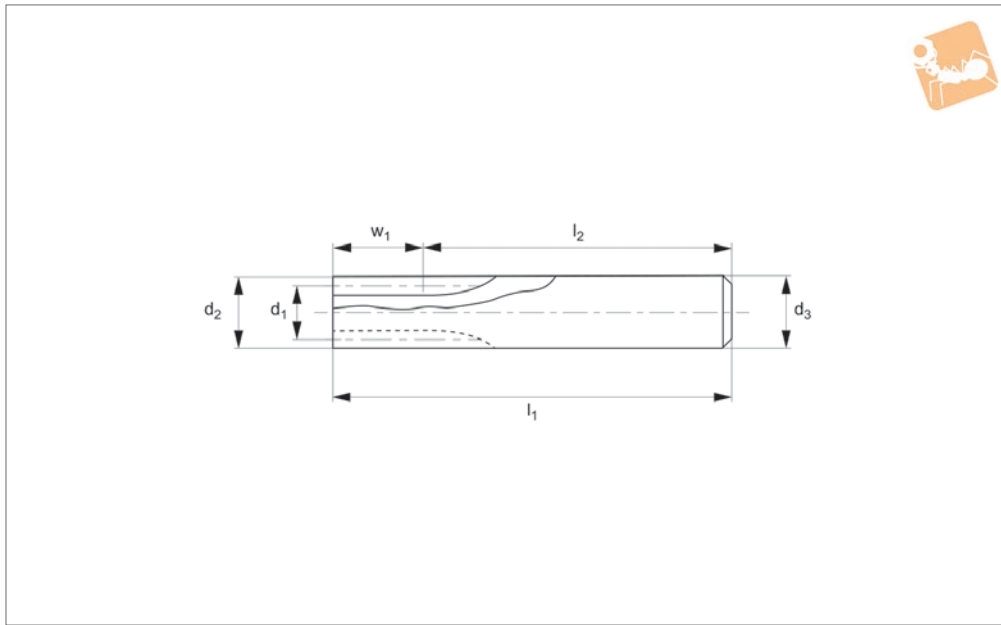
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5120.050-020	m 0.5	20	10.0	11.0	5	3	8	10	5	0.17	0.8
R5120.050-024	m 0.5	24	12.0	13.0	5	3	10	10	5	0.21	1.2
R5120.050-025	m 0.5	25	12.5	13.5	5	3	10	10	5	0.22	1.3
R5120.050-028	m 0.5	28	14.0	15.0	5	3	12	10	5	0.26	1.8
R5120.050-030	m 0.5	30	15.0	16.0	5	3	12	10	5	0.29	1.9
R5120.050-032	m 0.5	32	16.0	17.0	5	3	14	10	5	0.31	2.4
R5120.050-036	m 0.5	36	18.0	19.0	5	3	15	10	5	0.36	2.9
R5120.050-040	m 0.5	40	20.0	21.0	5	3	15	10	5	0.42	3.3
R5120.050-045	m 0.5	45	22.5	23.5	5	3	18	10	5	0.48	4.5
R5120.050-050	m 0.5	50	25.0	26.0	5	3	20	10	5	0.54	5.6
R5120.050-056	m 0.5	56	28.0	29.0	5	3	22	10	5	0.61	6.9
R5120.050-060	m 0.5	60	30.0	31.0	5	3	24	10	5	0.67	8.1
R5120.050-064	m 0.5	64	32.0	33.0	5	3	26	10	5	0.72	9.3
R5120.050-070	m 0.5	70	35.0	36.0	5	4	26	10	5	0.79	10.3
R5120.050-072	m 0.5	72	36.0	37.0	5	4	28	10	5	0.82	11.3
R5120.050-080	m 0.5	80	40.0	41.0	5	4	32	10	5	0.92	14.3
R5120.050-090	m 0.5	90	45.0	46.0	5	5	36	10	5	1.04	18.1
R5120.050-100	m 0.5	100	50.0	51.0	5	5	40	10	5	1.18	22.4
R5120.050-120	m 0.5	120	60.0	61.0	5	5	50	10	5	1.43	33.5



Spur Gears - Module 0.5

carbon steel - 10-14 teeth



R5121

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears= 0,01- 0,03 mm.

Tips

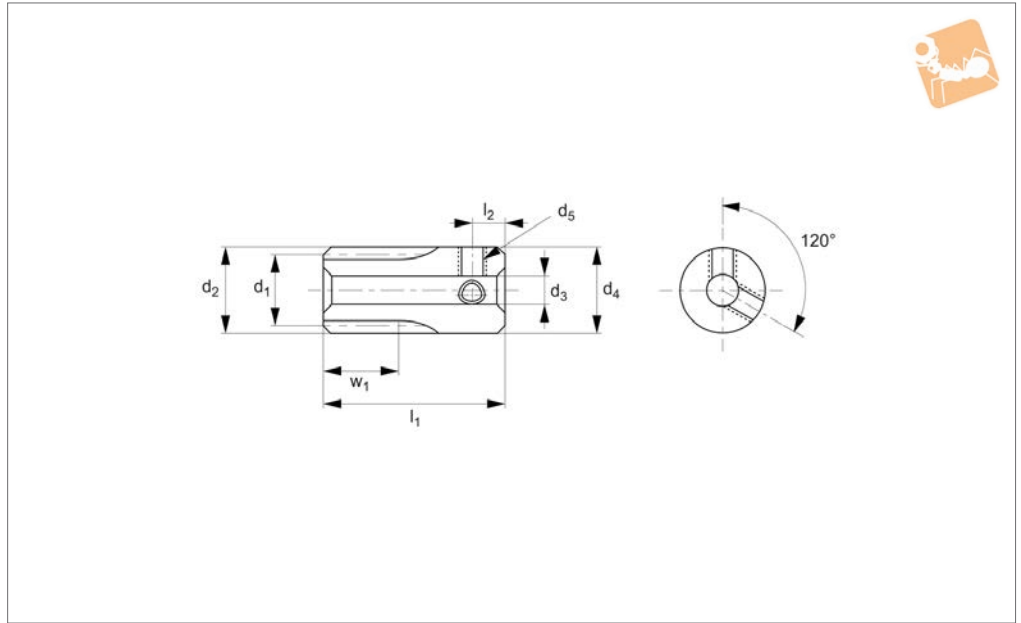
Module 0.5 for gears with 15-24 teeth see R5123, for gears with 25-120 teeth see R5125.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	Torque Nm max.	Weight g
R5121.050-010	m 0.5	10	5	6	10	6	55	45	0.59	11.5
R5121.050-012	m 0.5	12	6	7	10	7	55	45	0.81	15.8
R5121.050-014	m 0.5	14	7	8	10	8	55	45	1.06	20.8



R5123



Material

Carbon steel (ISO C45). Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,01 - 0,03mm.

Tips

For module 0.5 steel gears with 10-14 teeth, see R5121; for 25-120 teeth see R5125.

Max. allowable torque (Nm) is based on

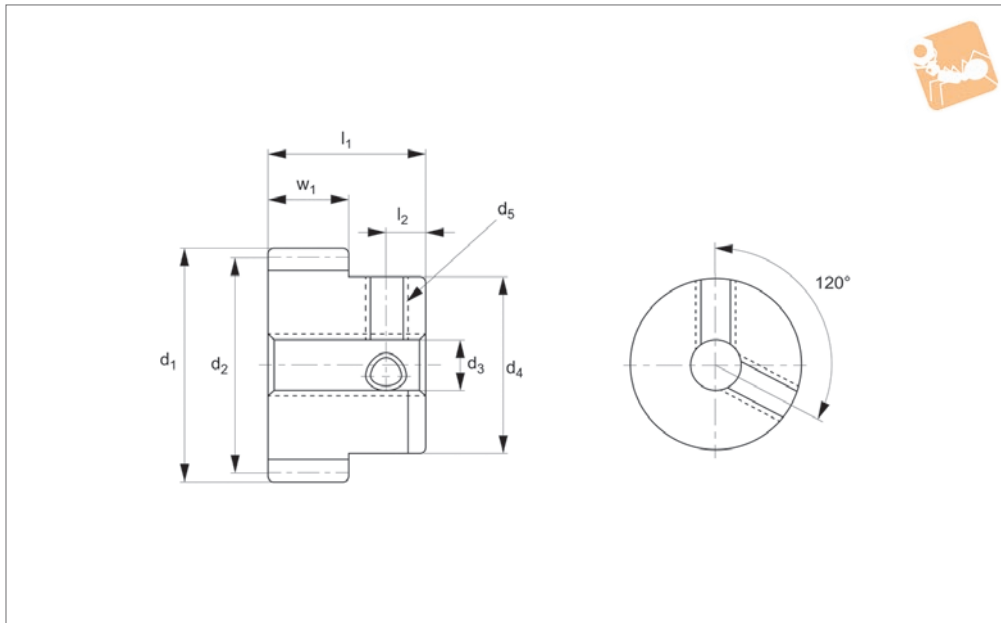
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5123.050-015	m 0.5	15	7.5	8.5	8	3	8.5	18	3	2xM 3	0.95	6.0
R5123.050-016	m 0.5	16	8.0	9.0	8	3	9.0	18	3	2xM 3	1.05	6.9
R5123.050-018	m 0.5	18	9.0	10.0	8	4	10.0	18	3	2xM 3	1.26	8.1
R5123.050-020	m 0.5	20	10.0	11.0	8	4	11.0	18	3	2xM 3	1.48	10.3
R5123.050-021	m 0.5	21	10.5	11.5	8	4	11.5	18	3	2xM 3	1.59	11.5
R5123.050-022	m 0.5	22	11.0	12.0	8	4	12.0	18	3	2xM 3	1.71	12.7
R5123.050-024	m 0.5	24	12.0	13.0	8	4	13.0	18	3	2xM 3	1.93	15.4



Spur Gears - Module 0.5 - Steel

carbon steel - 25-120 teeth



R5125

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45) Accuracy to JIS B 1702-1 (ISO) Class 8-9. Gear tooth surface induction hardened to HRC 47-53.

Amount of backlash when assembling gears = 0,01 - 0,03mm.

Tips

For module 0.5 steel gears with fewer teeth, see R5121 & R5123.

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Technical Notes

20° pressure angle, full depth tooth.

Max. allowable torque (Nm) is based on

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	d ₄	l ₁	l ₂	Thread d ₄	Torque Nm max.	Weight g
R5125.050-025-04	m 0.5	25	12.5	13.5	8	4	10	16	4	2xM 3	2.05	10.8
R5125.050-026-04	m 0.5	26	13.0	14.0	8	4	10	16	4	2xM 3	2.17	11.4
R5125.050-027-04	m 0.5	27	13.5	14.5	8	4	10	16	4	2xM 3	2.27	12.1
R5125.050-028-04	m 0.5	28	14.0	15.0	8	4	10	16	4	2xM 3	2.40	12.8
R5125.050-030-04	m 0.5	30	15.0	16.0	8	5	12	16	4	2XM 3	1.65	12.7
R5125.050-030-H4	m 0.5	30	15.0	16.0	5	4 tol. H*	12	13	-	-	1.75	12.7
R5125.050-030-05	m 0.5	30	15.0	16.0	8	5	12	16	4	2xM 3	2.63	15.4
R5125.050-032-05	m 0.5	32	16.0	17.0	5	5	12	13	4	2xM 3	1.80	12.7
R5125.050-035-05	m 0.5	35	17.5	18.5	5	5	12	13	4	2xM 3	2.02	14.2
R5125.050-036-05	m 0.5	36	18.0	19.0	5	5	12	13	4	2xM 3	2.10	14.8
R5125.050-040-04	m 0.5	40	20.0	21.0	5	4 tol.H8	15	13	-	-	2.40	22.1
R5125.050-040-H4	m 0.5	40	20.0	21.0	5	4 tol. H*	15	13	-	-	2.54	22.1
R5125.050-040-05	m 0.5	40	20.0	21.0	5	5	15	13	4	2xM 3	2.40	21.0
R5125.050-040-H5	m 0.5	42	21.0	22.0	5	5	15	13	4	2xM 3	2.56	22.3
R5125.050-044-05	m 0.5	44	22.0	23.0	5	5	15	13	4	2xM 3	2.71	23.6
R5125.050-045-05	m 0.5	45	22.5	23.5	5	5	15	13	4	2xM 3	2.79	24.3
R5125.050-048-05	m 0.5	48	24.0	25.0	5	5	15	13	4	2xM 3	3.02	26.4
R5125.050-050-04	m 0.5	50	25.0	26.0	5	4 tol.H8	18	13	-	-	3.16	33.9
R5125.050-050-H4	m 0.5	50	25.0	26.0	5	4 tol. H*	18	13	-	-	3.35	33.9
R5125.050-050-05	m 0.5	50	25.0	26.0	5	5	15	13	4	2xM 3	3.18	27.9
R5125.050-052-05	m 0.5	52	26.0	27.0	5	5	15	13	4	2xM 3	3.33	29.5
R5125.050-054-05	m 0.5	54	27.0	28.0	5	5	15	13	4	2xM 3	3.49	31.1
R5125.050-055-05	m 0.5	55	27.5	28.5	5	5	15	13	4	2xM 3	3.57	32.0
R5125.050-056-05	m 0.5	56	28.0	29.0	5	5	15	13	4	2xM 3	3.65	32.8
R5125.050-060-05	m 0.5	60	30.0	31.0	5	5	22	13	-	-	3.94	49.5
R5125.050-060-H5	m 0.5	60	30.0	31.0	5	5 tol. H*	22	13	-	-	4.18	49.5
R5125.050-060-06	m 0.5	60	30.0	31.0	5	6	18	13	4	2xM 4	3.96	39.9
R5125.050-064-06	m 0.5	64	32.0	33.0	5	6	18	13	4	2xM 4	4.28	43.7
R5125.050-070-05	m 0.5	70	35.0	36.0	5	5	25	13	-	-	4.73	66.5
R5125.050-070-H5	m 0.5	70	35.0	36.0	5	5 tol. H*	25	13	-	-	5.01	66.5



Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	d ₄	l ₁	l ₂	Thread d ₄	Torque Nm max.	Weight g
R5125.050-070-06	m 0.5	70	35.0	36.0	5	6	18	13	4	2xM 4	4.76	49.9
R5125.050-072-06	m 0.5	72	36.0	37.0	5	6	18	13	4	2xM 4	4.92	52.1
R5125.050-075-06	m 0.5	75	37.5	38.5	5	6	18	13	4	2xM 4	5.16	55.5
R5125.050-080-06	m 0.5	80	40.0	41.0	5	6	28	13	-	-	5.52	85.0
R5125.050-080-H6	m 0.5	80	40.0	41.0	5	6 tol. H*	28	13	-	-	5.85	85.0
R5125.050-080-08	m 0.5	80	40.0	41.0	5	8	22	13	4	2xM 4	5.56	67.0
R5125.050-090-06	m 0.5	90	45.0	46.0	5	6	32	13	-	-	6.31	109.9
R5125.050-090-H6	m 0.5	90	45.0	46.0	5	6 tol. H*	32	13	-	-	6.69	109.9
R5125.050-090-08	m 0.5	90	45.0	46.0	5	8	22	13	4	2xM 4	6.36	80.1
R5125.050-096-08	m 0.5	96	48.0	49.0	5	8	22	13	4	2xM 4	6.84	88.7
R5125.050-100-06	m 0.5	100	50.0	51.0	5	6	35	13	-	-	7.10	134.4
R5125.050-100-H6	m 0.5	100	50.0	51.0	5	6 tol. H*	35	13	-	-	7.53	134.4
R5125.050-100-08	m 0.5	100	50.0	51.0	5	8	25	13	4	2xM 4	7.16	101.4
R5125.050-110-08	m 0.5	110	55.0	56.0	5	8	25	13	4	2xM 4	7.97	117.6
R5125.050-120-06	m 0.5	120	60.0	61.0	5	6	42	13	-	-	8.70	194.9
R5125.050-120-H6	m 0.5	120	60.0	61.0	5	6 tol. H*	42	13	-	-	9.23	194.9
R5125.050-120-08	m 0.5	120	60.0	61.0	5	8	25	13	4	2xM 4	8.78	135.4

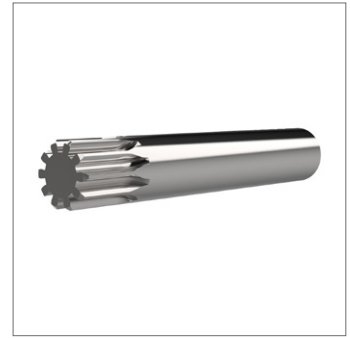
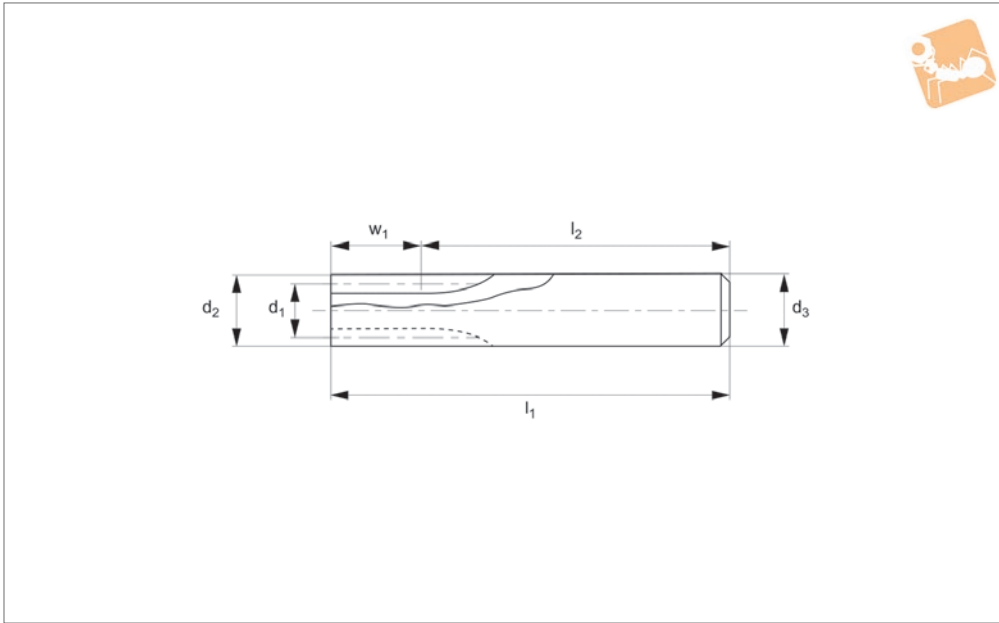


Spur Gears - Module 0.75 - Stainless

stainless steel - 10 teeth



Standard Spur Gears



R5126

STANDARD SPUR GEARS

Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

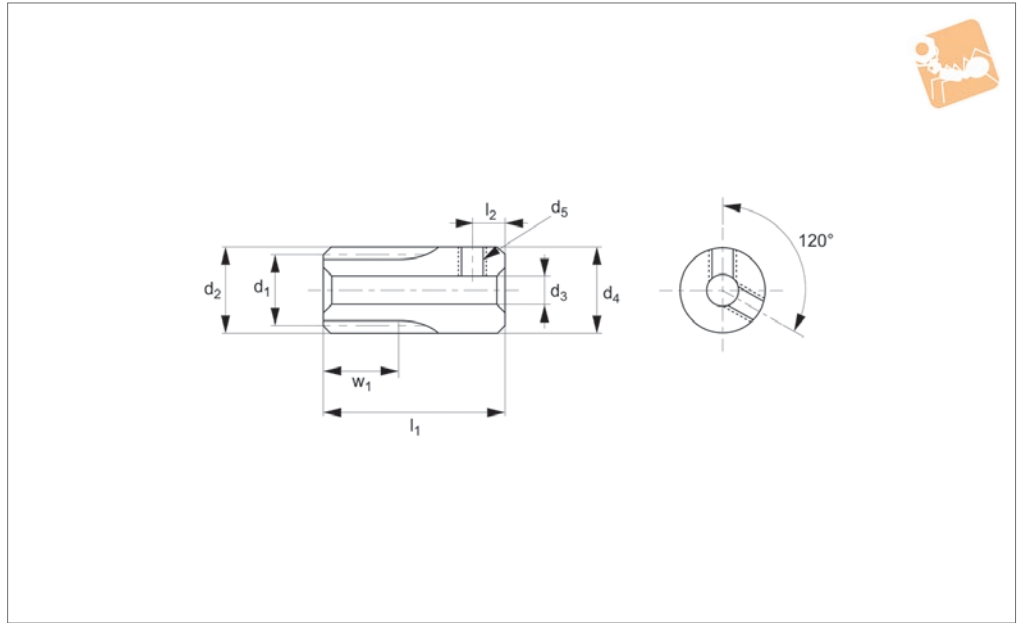
For module 0.75 stainless steel gears with more teeth, see R5128 & R5129.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	Torque Nm max.	Weight g
R5126.075-010	m 0.75	10	7.5	9	8	9	55	47	0.52	26.5



R5128



Material

Carbon steel (ISO C45). Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

For a module 0.75 steel gear with 10 teeth, see R5126; or for 16-120 teeth, see R5129.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

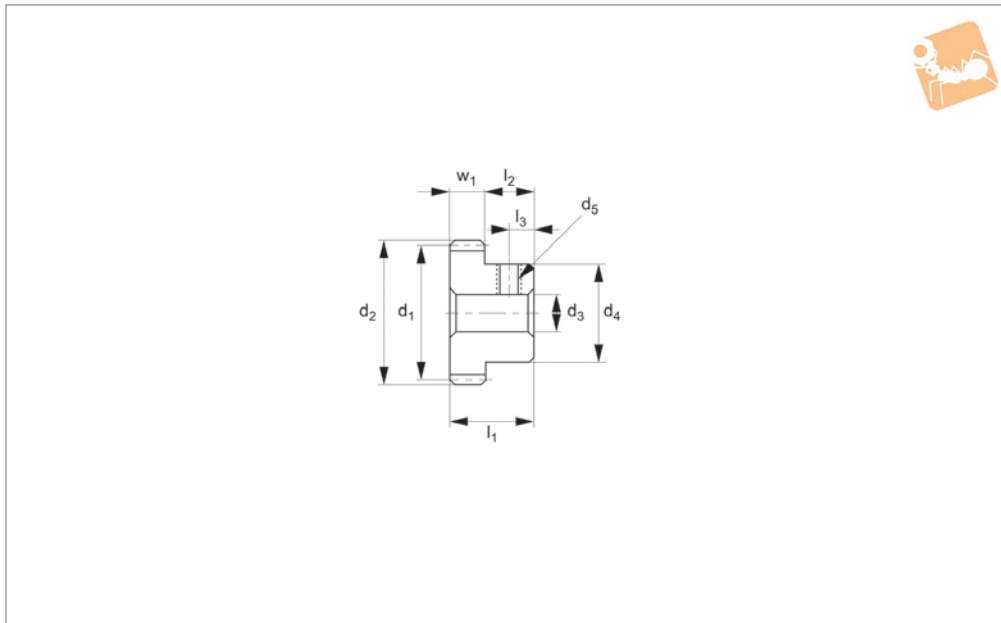
nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H8	d_4	l_1	l_2	Thread d_5	Torque Nm max.	Weight g
R5128.075-014	m 0.75	14	10.5	12.0	8	5	12.0	20	3.0	M 3	0.95	12.9
R5128.075-015	m 0.75	15	11.3	12.8	8	5	12.8	20	3.0	M 3	1.07	15.0



Spur Gears - Module 0.75 - Stainless

stainless steel - 16-120 teeth



R5129

STANDARD SPUR GEARS

Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

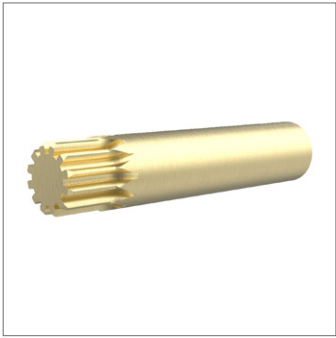
gears = 0,015 - 0,045mm.

Tips

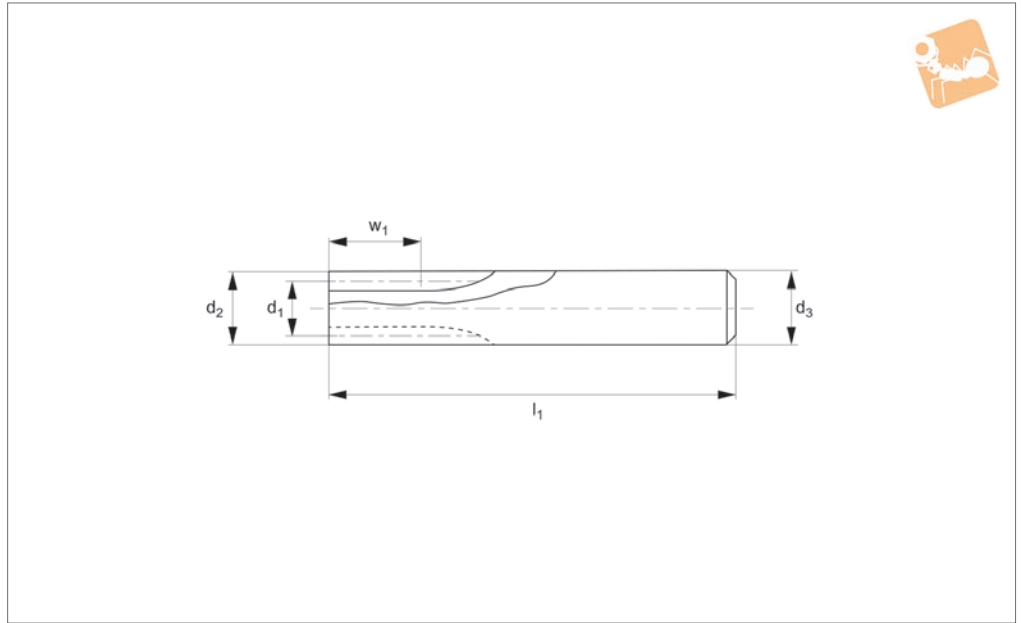
For module 0.75 stainless steel gears with fewer teeth, see R5126 & R5128.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5129.075-016	m 0.75	16	12.0	13.5	8	5	10	15	7	3.5	M 3	1.18	9.1
R5129.075-018	m 0.75	18	13.5	15.0	8	5	11	15	7	3.5	M 3	1.42	11.9
R5129.075-020	m 0.75	20	15.0	16.5	8	6	12	15	7	3.5	M 4	1.67	13.9
R5129.075-021	m 0.75	21	15.8	17.3	8	6	12	15	7	3.5	M 4	1.79	15.1
R5129.075-022	m 0.75	22	16.5	18.0	8	6	12	15	7	3.5	M 4	1.92	16.3
R5129.075-024	m 0.75	24	18.0	19.5	8	6	14	15	7	3.5	M 4	2.18	21.0
R5129.075-025	m 0.75	25	18.8	20.3	8	6	14	15	7	3.5	M 4	2.31	22.4
R5129.075-026	m 0.75	26	19.5	21.0	8	6	14	15	7	3.5	M 4	2.44	23.8
R5129.075-028	m 0.75	28	21.0	22.5	8	6	14	15	7	3.5	M 4	2.70	26.9
R5129.075-030	m 0.75	30	22.5	24.0	8	6	14	15	7	3.5	M 4	2.96	31.3
R5129.075-032	m 0.75	32	24.0	25.5	6	6	15	15	9	4.0	M 4	2.42	30.4
R5129.075-036	m 0.75	36	27.0	28.5	6	6	18	15	9	4.0	M 4	2.83	41.6
R5129.075-040	m 0.75	40	30.0	31.5	6	6	20	15	9	4.0	M 4	3.24	52.2
R5129.075-044	m 0.75	44	33.0	34.5	6	6	20	15	9	4.0	M 4	3.66	59.2
R5129.075-045	m 0.75	45	33.8	35.3	6	6	20	15	9	4.0	M 4	3.76	61.1
R5129.075-048	m 0.75	48	36.0	37.5	6	6	20	15	9	4.0	M 4	4.08	67.0
R5129.075-056	m 0.75	56	42.0	43.5	6	6	20	15	9	4.0	M 4	4.92	84.5
R5129.075-060	m 0.75	60	45.0	46.5	6	6	22	15	9	4.0	M 4	5.35	98.9
R5129.075-072	m 0.75	72	54.0	55.5	6	6	25	15	9	4.0	M 4	6.64	139.9
R5129.075-080	m 0.75	80	60.0	61.5	6	8	25	15	9	4.0	M 4	7.51	163.0
R5129.075-100	m 0.75	100	75.0	76.5	6	8	30	15	9	4.0	M 4	9.67	253.9
R5129.075-120	m 0.75	120	90.0	91.5	6	8	30	15	9	4.0	M 4	11.86	346.3



R5130



Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

For module 0.75 brass gears with 14-48 teeth, see R5132 & R5133; for 50-120 teeth, see R5135 & R5136.
Max. allowable torque (Nm) is based on

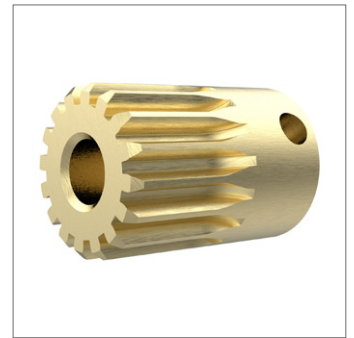
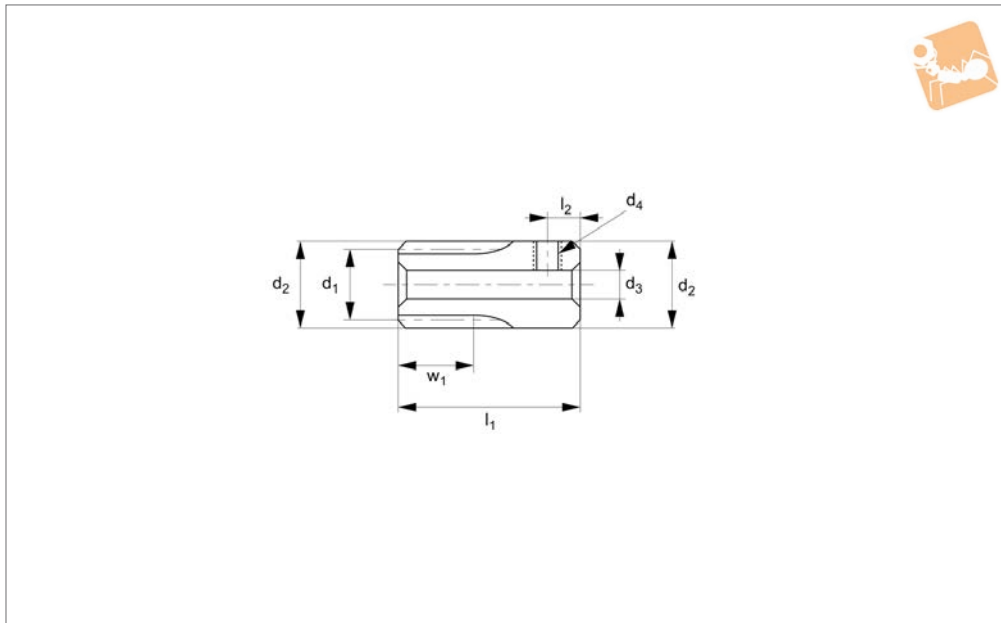
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H8	l_1	Torque Nm max.	Weight g
R5130.075-010	m 0.75	10	7.5	9.0	8	9	55	0.21	28.4
R5130.075-012	m 0.75	12	9.0	10.5	8	11	55	0.29	42.3



Spur Gears - Module 0.75 - Brass

brass - 14-20 teeth



R5132

STANDARD SPUR GEARS

Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

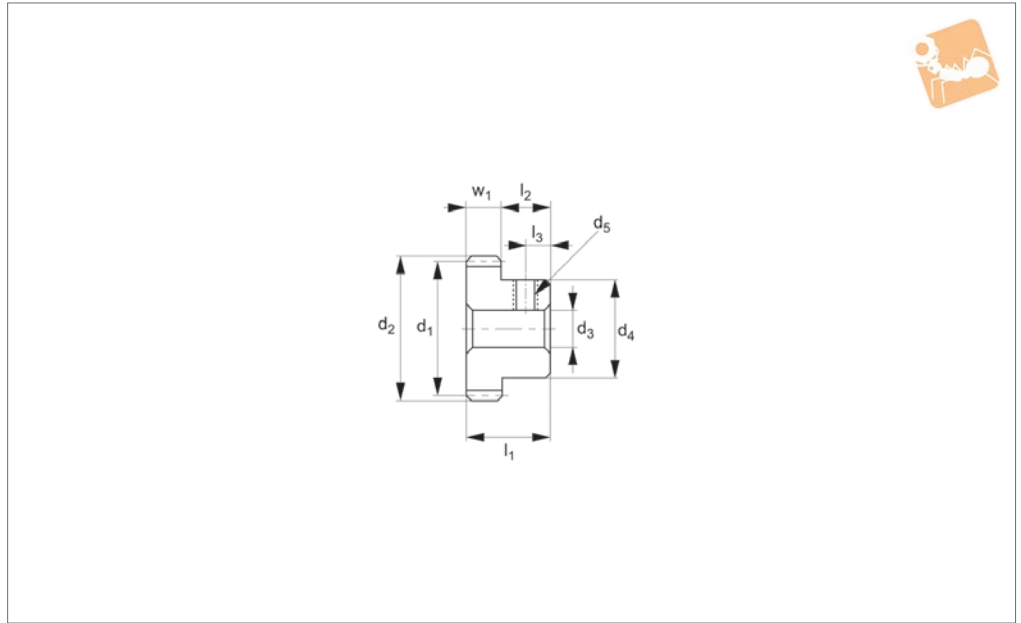
For module 0.75 brass gears with 10-12 teeth teeth, see R5130; for 16-48 teeth, see R5133; for gears with 50-120 teeth see R5135 (hubless) & R5136.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	Thread d ₄	Torque Nm max.	Weight g
R5132.075-014	m 0.75	14	10.5	12.0	8	5	20	3	M 3	0.38	13.9
R5132.075-015	m 0.75	15	11.3	12.8	8	5	20	3	M 3	0.43	16.3
R5132.075-016	m 0.75	16	12.0	13.5	8	5	20	3	M 3	0.47	18.8
R5132.075-018	m 0.75	18	13.5	15.0	8	5	20	3	M 3	0.57	24.2
R5132.075-020	m 0.75	20	15.0	16.5	8	5	20	3	M 3	0.67	30.2



R5133



Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

For module 0.75 brass gears with 10-12 teeth or 14-20 teeth, see R5130 & R5132; for 50-120 teeth see R5135 (hubless) & R5136.

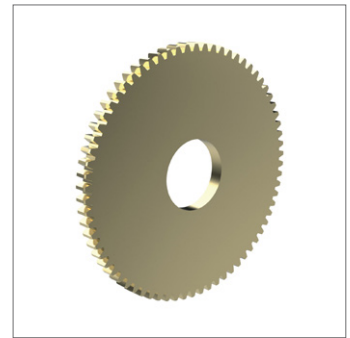
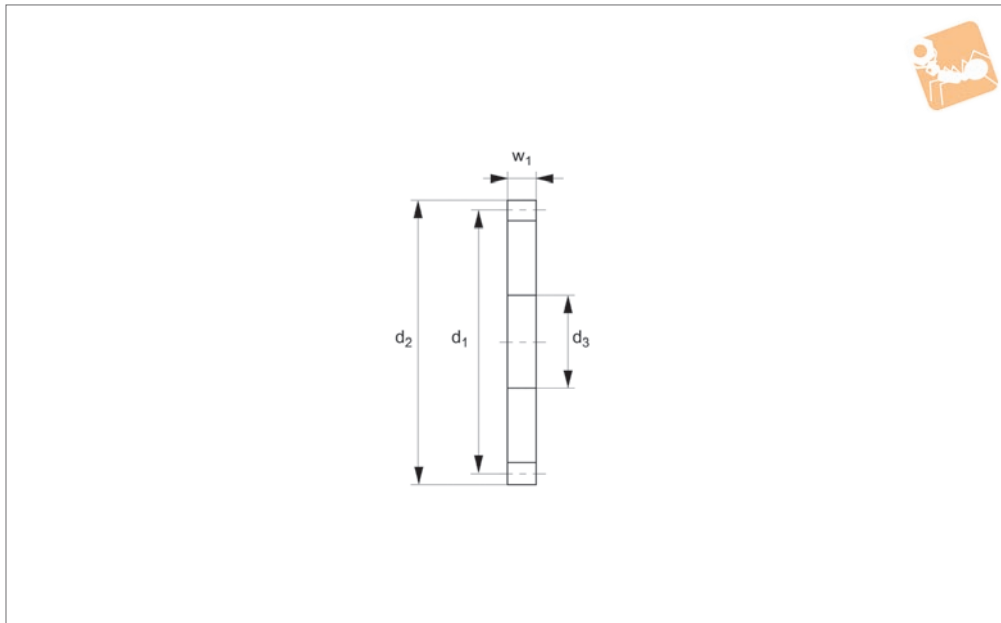
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5133.075-016	m 0.75	16	12.0	13.5	3	5	10	10	7	3.5	M 3	0.18	5.8
R5133.075-018	m 0.75	18	13.5	15.0	3	5	11	10	7	3.5	M 3	0.21	7.5
R5133.075-020	m 0.75	20	15.0	16.5	3	6	12	10	7	3.5	M 4	0.25	8.6
R5133.075-024	m 0.75	24	18.0	19.5	3	6	14	10	7	3.5	M 4	0.33	11.7
R5133.075-025	m 0.75	25	18.8	20.3	3	6	14	10	7	3.5	M 4	0.35	12.3
R5133.075-026	m 0.75	26	19.5	21.0	3	6	14	10	7	3.5	M 4	0.37	12.9
R5133.075-028	m 0.75	28	21.0	22.5	3	6	14	10	7	3.5	M 4	0.40	14.1
R5133.075-030	m 0.75	30	22.5	24.0	3	6	15	10	7	3.5	M 4	0.45	16.7
R5133.075-032	m 0.75	32	24.0	25.5	3	6	15	10	7	3.5	M 4	0.49	18.1
R5133.075-035	m 0.75	35	26.3	27.8	3	6	18	10	7	3.5	M 4	0.55	24.9
R5133.075-036	m 0.75	36	27.0	28.5	3	6	18	10	7	3.5	M 4	0.57	25.7
R5133.075-040	m 0.75	40	30.0	31.5	3	6	20	10	7	3.5	M 4	0.65	33.8
R5133.075-042	m 0.75	42	31.5	33.0	3	6	20	10	7	3.5	M 4	0.69	35.6
R5133.075-045	m 0.75	45	33.8	35.3	3	6	20	10	7	3.5	M 4	0.75	38.6
R5133.075-048	m 0.75	48	36.0	37.5	3	6	20	10	7	3.5	M 4	0.82	41.7



Spur Gears - Module 0.75 - Brass

brass - 50-120 teeth - hubless



R5135

STANDARD SPUR GEARS

Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

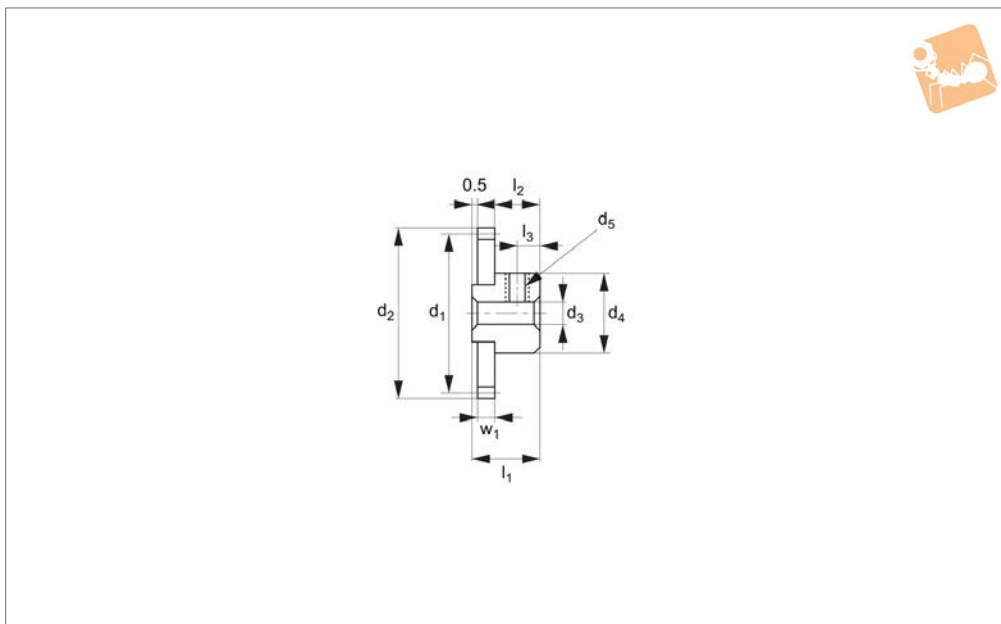
For module 0.75 brass gears with fewer teeth, see R5130, R5132 & R5133. For a version of this product with hub, see R5136.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	Torque Nm max.	Weight g
R5135.075-050	m 0.75	50	37.5	39.0	3	15	0.86	23.7
R5135.075-055	m 0.75	55	41.3	42.8	3	15	0.96	29.6
R5135.075-056	m 0.75	56	42.0	43.5	3	15	0.98	30.8
R5135.075-058	m 0.75	58	43.5	45.0	3	15	1.03	33.4
R5135.075-060	m 0.75	60	45.0	46.5	3	15	1.07	36.1
R5135.075-062	m 0.75	62	46.5	48.0	3	15	1.11	38.8
R5135.075-064	m 0.75	64	48.0	49.5	3	15	1.16	41.6
R5135.075-065	m 0.75	65	48.8	50.3	3	15	1.18	43.1
R5135.075-066	m 0.75	66	49.5	51.0	3	15	1.20	44.6
R5135.075-068	m 0.75	68	51.0	52.5	3	15	1.24	47.6
R5135.075-070	m 0.75	70	52.5	54.0	3	15	1.28	50.7
R5135.075-072	m 0.75	72	54.0	55.5	3	15	1.33	53.9
R5135.075-075	m 0.75	75	56.3	57.8	3	15	1.39	58.9
R5135.075-080	m 0.75	80	60.0	61.5	3	15	1.50	67.6
R5135.075-085	m 0.75	85	63.8	65.3	3	15	1.61	76.9
R5135.075-090	m 0.75	90	67.5	69.0	3	15	1.72	86.7
R5135.075-095	m 0.75	95	71.3	72.8	3	15	1.82	97.2
R5135.075-100	m 0.75	100	75.0	76.5	3	15	1.93	108.1
R5135.075-105	m 0.75	105	78.8	80.3	3	15	2.04	119.7
R5135.075-110	m 0.75	110	82.5	84.0	3	15	2.15	131.8
R5135.075-115	m 0.75	115	86.3	87.8	3	15	2.26	144.5
R5135.075-120	m 0.75	120	90.0	91.5	3	15	2.37	157.7



R5136



Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015- 0,045mm.

Tips

For module 0.75 brass gears with fewer teeth, see R5130, R5132 & R5133. For a hubless version of this product, see R5135.
Max. allowable torque (Nm) is based on

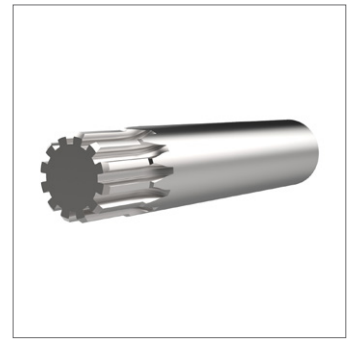
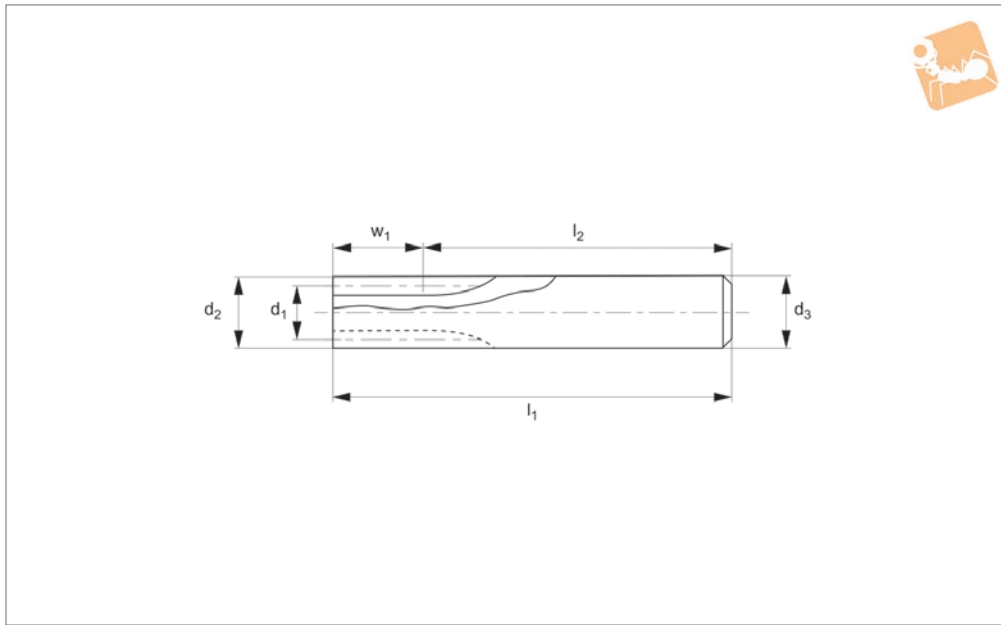
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5136.075-050	m 0.75	50	37.5	39.0	3	6	20	10.5	7	3.5	M 4	0.86	43.8
R5136.075-055	m 0.75	55	41.3	42.8	3	6	20	10.5	7	3.5	M 4	0.96	49.7
R5136.075-056	m 0.75	56	42.0	43.5	3	6	20	10.5	7	3.5	M 4	0.98	50.9
R5136.075-058	m 0.75	58	43.5	45.0	3	6	20	10.5	7	3.5	M 4	1.03	53.5
R5548.075-060	m 0.75	60	45.0	46.5	3	6	20	10.5	7	3.5	M 4	1.07	56.2
R5136.075-062	m 0.75	62	46.5	48.0	3	6	20	10.5	7	3.5	M 4	1.11	58.9
R5136.075-064	m 0.75	64	48.0	49.5	3	6	20	10.5	7	3.5	M 4	1.16	61.8
R5136.075-065	m 0.75	65	48.8	50.3	3	6	20	10.5	7	3.5	M 4	1.18	63.2
R5136.075-066	m 0.75	66	49.5	51.0	3	6	20	10.5	7	3.5	M 4	1.20	64.7
R5136.075-068	m 0.75	68	51.0	52.5	3	6	20	10.5	7	3.5	M 4	1.24	67.7
R5136.075-070	m 0.75	70	52.5	54.0	3	6	20	10.5	7	3.5	M 4	1.28	70.8
R5136.075-072	m 0.75	72	54.0	55.5	3	6	20	10.5	7	3.5	M 4	1.33	74.0
R5136.075-075	m 0.75	75	56.3	57.8	3	6	20	10.5	7	3.5	M 4	1.39	79.0
R5136.075-080	m 0.75	80	60.0	61.5	3	6	20	10.5	7	3.5	M 4	1.50	87.7
R5136.075-085	m 0.75	85	63.8	65.3	3	6	20	10.5	7	3.5	M 4	1.61	97.0
R5136.075-090	m 0.75	90	67.5	69.0	3	6	20	10.5	7	3.5	M 4	1.72	106.9
R5136.075-095	m 0.75	95	71.3	72.8	3	6	20	10.5	7	3.5	M 4	1.82	117.3
R5136.075-100	m 0.75	100	75.0	76.5	3	6	20	10.5	7	3.5	M 4	1.93	128.3
R5136.075-105	m 0.75	105	78.8	80.3	3	6	20	10.5	7	3.5	M 4	2.04	139.8
R5136.075-110	m 0.75	110	82.5	84.0	3	6	20	10.5	7	3.5	M 4	2.15	151.9
R5136.075-115	m 0.75	115	86.3	87.8	3	6	20	10.5	7	3.5	M 4	2.26	164.6
R5136.075-120	m 0.75	120	90.0	91.5	3	6	20	10.5	7	3.5	M 4	2.37	177.8



Spur Gears - Module 0.75 - Steel

carbon steel - 10-12 teeth



R5137

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45). Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,015 - 0,045mm.

Tips

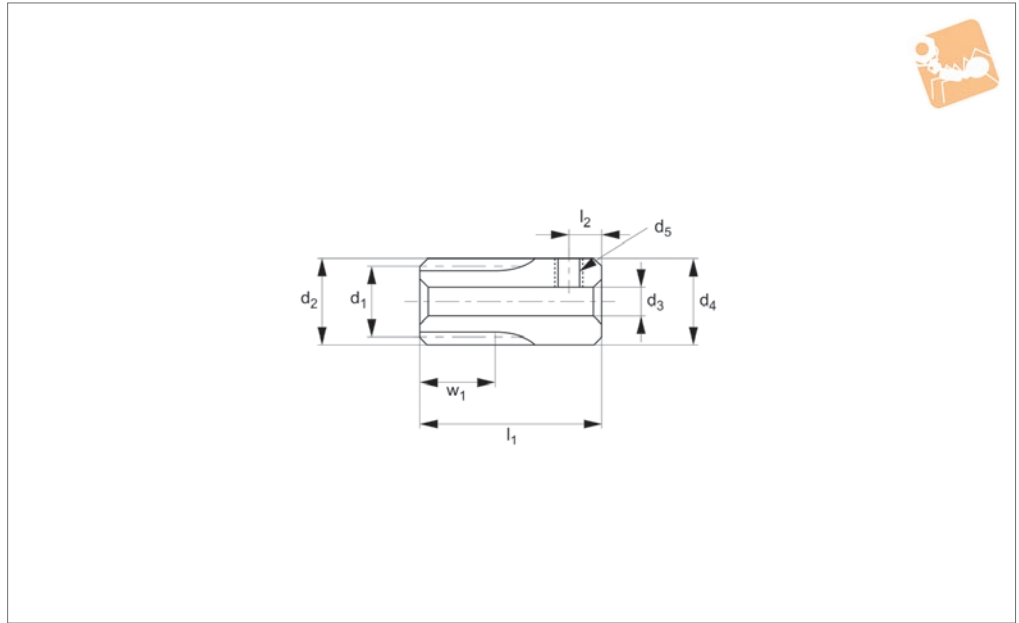
For module 0.75 steel gears with 14-15 teeth, see R5138; for 16-120 teeth, see R5140.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	Torque Nm max.	Weight g
R5137.075-010	m 0.75	10	7.5	9.0	8	9	55	47	1.06	26.3
R5137.075-012	m 0.75	12	9.5	10.5	8	11	55	47	1.46	39.1



R5138



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears= 0,015- 0,045 mm.

Tips

For module 0.75 steel gears with 10-12 teeth, see R5137; for 16-120 teeth see R5140.
Max. allowable torque (Nm) is based on

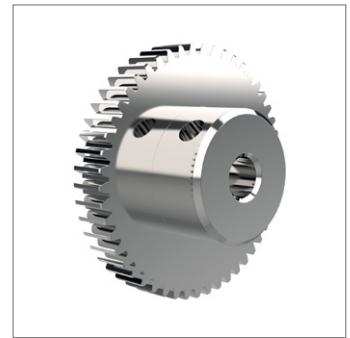
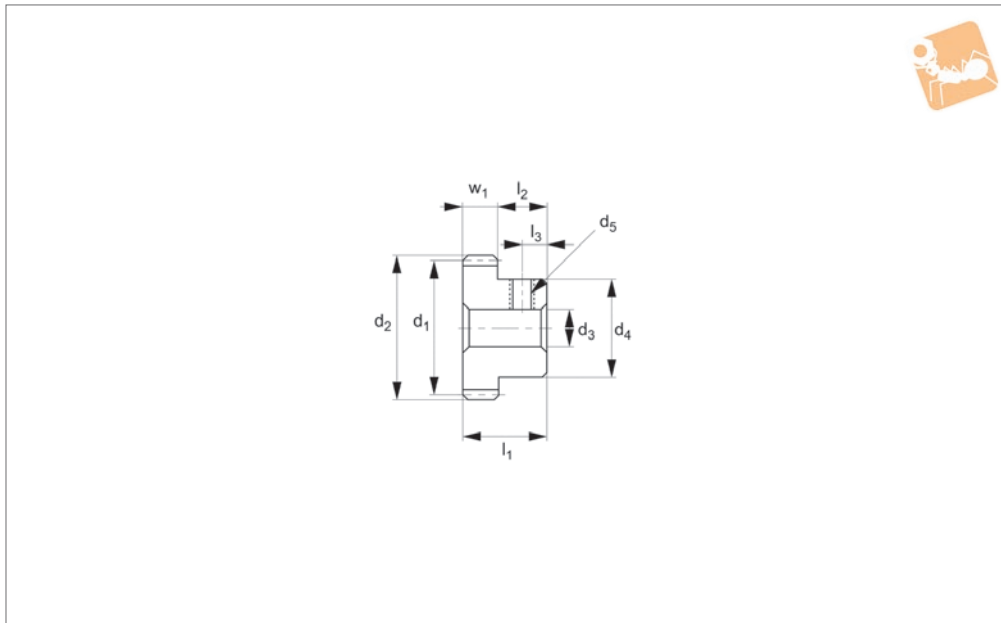
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5138.075-014	m 0.75	14	10.5	12.0	8	5	12.0	20	3	M 3	1.90	12.9
R5138.075-015	m 0.75	15	11.3	12.8	8	5	12.8	20	3	M 3	2.13	15.0



Spur Gears - Module 0.75 - Steel

carbon steel - 16-120 teeth



R5140

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears= 0,015- 0,045 mm.

Tips

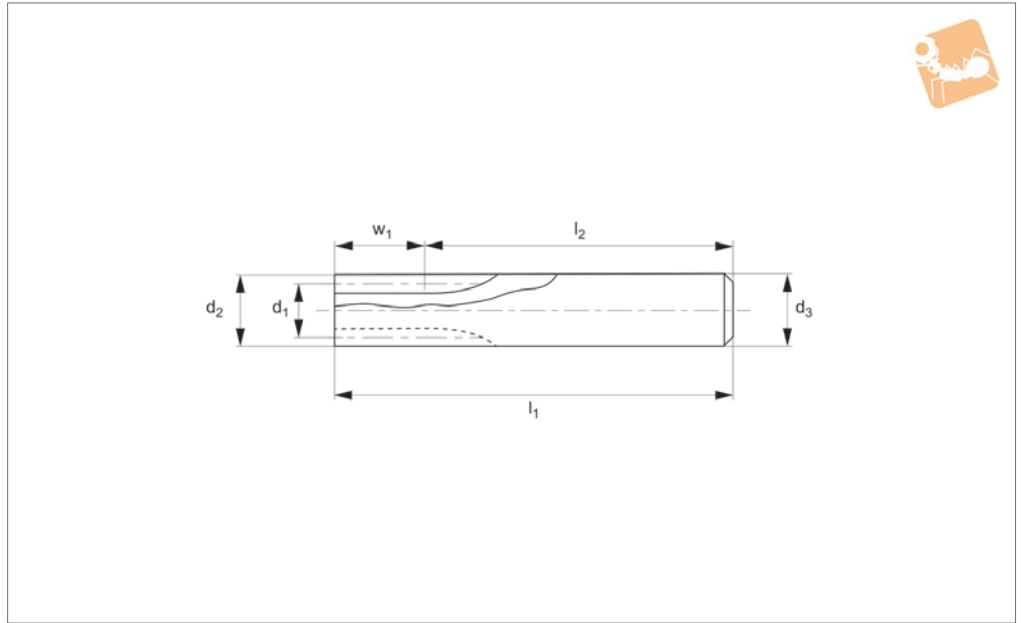
For module 0.75 steel gears with 10-12 teeth or 14-15 teeth, see R5137 & R5138.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5140.075-016	m 0.75	16	12.0	13.5	8	5	10	15	7	3.5	M 4	2.37	8.9
R5140.075-018	m 0.75	18	13.5	15.0	8	5	11	15	7	3.5	M 4	2.84	11.7
R5140.075-020	m 0.75	20	15.0	16.5	8	6	12	15	7	3.5	M 4	3.34	13.8
R5140.075-024	m 0.75	24	18.0	19.5	8	6	14	15	7	3.5	M 4	4.35	20.8
R5140.075-025	m 0.75	25	18.8	20.3	8	6	14	15	7	3.5	M 4	4.61	22.2
R5140.075-028	m 0.75	28	21.0	22.5	8	6	14	15	7	3.5	M 4	5.40	26.6
R5140.075-030	m 0.75	30	22.5	24.0	8	6	15	15	7	3.5	M 4	5.93	31.0
R5140.075-032	m 0.75	32	24.0	25.5	6	6	15	15	9	4.0	M 4	4.85	30.1
R5140.075-034	m 0.75	35	26.3	27.8	6	6	18	15	9	4.0	M 4	5.46	39.7
R5140.075-036	m 0.75	36	27.0	28.5	6	6	18	15	9	4.0	M 4	5.66	41.2
R5140.075-040	m 0.75	40	30.0	31.5	6	6	20	15	9	4.0	M 4	6.49	51.7
R5140.075-045	m 0.75	45	33.8	35.3	6	6	20	15	9	4.0	M 4	7.53	60.5
R5140.075-048	m 0.75	48	36.0	37.5	6	6	20	15	9	4.0	M 4	8.15	66.3
R5140.075-050	m 0.75	50	37.5	39.0	6	6	20	15	9	4.0	M 4	8.58	70.4
R5140.075-056	m 0.75	56	42.0	43.5	6	6	20	15	9	4.0	M 4	9.85	83.6
R5140.075-060	m 0.75	60	45.0	46.5	6	6	22	15	9	4.0	M 4	10.70	97.9
R5140.075-064	m 0.75	64	48.0	49.5	6	6	22	15	9	4.0	M 4	11.56	108.2
R5140.075-070	m 0.75	70	52.5	54.0	6	6	22	15	9	4.0	M 4	12.85	124.9
R5140.075-072	m 0.75	72	54.0	55.5	6	6	25	15	9	4.0	M 4	13.28	138.5
R5140.075-080	m 0.75	80	60.0	61.5	6	8	25	15	9	4.0	M 4	15.01	161.3
R5140.075-090	m 0.75	90	67.5	69.0	6	8	30	15	9	4.0	M 4	17.16	211.8
R5140.075-100	m 0.75	100	75.0	76.5	6	8	30	15	9	4.0	M 4	19.34	251.3
R5140.075-120	m 0.75	120	90.0	91.5	6	8	30	15	9	4.0	M 4	23.71	342.9



R5141



Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,016 - 0,048mm.

Tips

For module 0.8 stainless steel gears with more teeth, see R5142, R5144 (boreless) & R5146.

Max. allowable torque (Nm) is based on

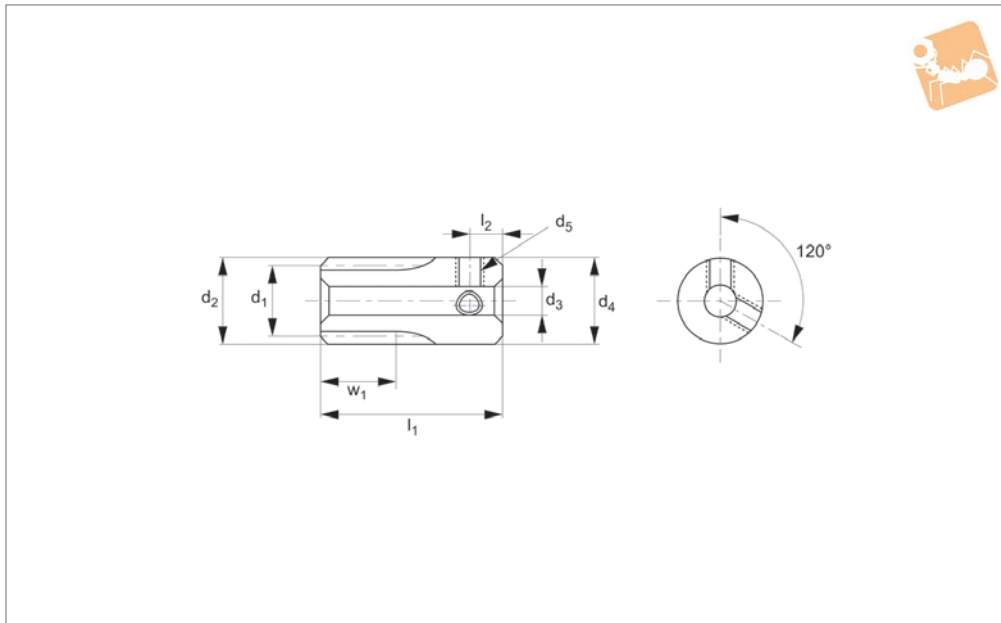
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H8	l_1	l_2	Torque Nm max.	Weight g
R5141.080-010	m 0.8	10	8.0	9.6	10	10	60	50	0.74	35.1
R5141.080-012	m 0.8	12	9.6	11.2	10	12	60	50	1.04	50.6



Spur Gears - Module 0.8 - Stainless

stainless steel - 14-15 teeth



R5142

STANDARD SPUR GEARS

Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,016 - 0,048mm.

Tips

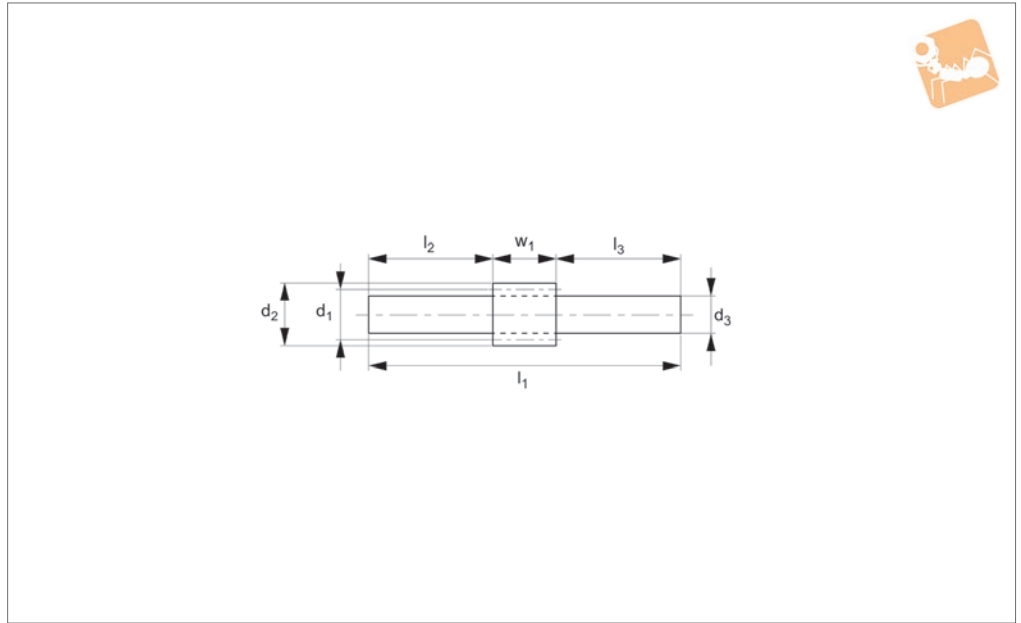
For a version of this product with fewer teeth, see R5141. Or, for module 0.8 stainless steel gears with more teeth, see R5144 (boreless) & R5146.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5142.080-014	m 0.8	14	11.2	12.8	7	4	12.8	20	13	2xM 3	0.95	16.3
R5142.080-015	m 0.8	15	12.0	13.6	7	4	13.6	20	13	2xM 3	1.06	18.8



R5144



Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,016 - 0,048mm.

Tips

For a version of this product with a bore, see R5142. For stainless steel module 0.8 gears with 10-12 teeth, see R5141; for 16-120 teeth, see R5146.

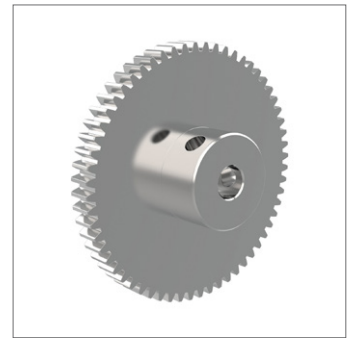
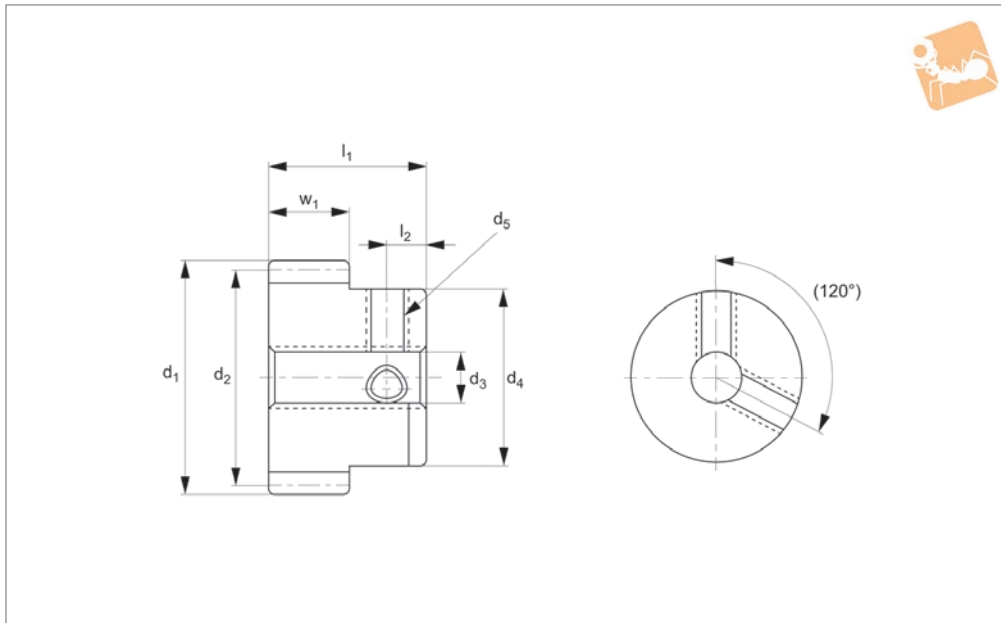
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	l ₁	l ₂	l ₃	Torque Nm max.	Weight g
R5144.080-014	m 0.8	14	11.2	12.8	7	6	95	28	60	0.95	25.2
R5144.080-015	m 0.8	15	12.0	13.6	7	6	95	28	60	1.06	26.0
R5144.080-016	m 0.8	16	12.8	14.4	7	6	95	28	60	1.18	26.9
R5144.080-018	m 0.8	18	14.4	16.0	7	8	95	28	60	1.42	44.1
R5144.080-020	m 0.8	20	16.0	17.6	7	10	95	28	60	1.66	66.0



Spur Gears - Module 0.8

stainless steel - 16-120 teeth



R5146

STANDARD SPUR GEARS

Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,016 - 0,048mm.

Tips

For module 0.8 stainless steel gears with fewer teeth, see R5142; for boreless gears with fewer teeth, see R5141 & R5144.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5146.080-016-12-05-04	m 0.8	16	12.8	14.4	5	4	10	12	3	2xM 3	0.84	8.0
R5146.080-016-14-07-04	m 0.8	16	12.8	14.4	7	4	10	14	3	2xM 3	1.18	9.8
R5146.080-018-12-05-04	m 0.8	18	14.4	16.0	5	4	10	12	3	2xM 3	1.01	9.3
R5146.080-018-14-07-04	m 0.8	18	14.4	16.0	7	4	10	14	3	2xM 3	1.42	11.7
R5146.080-020-12-05-04	m 0.8	20	16.0	17.6	5	4	10	12	3	2xM 3	1.19	10.9
R5146.080-020-14-07-04	m 0.8	20	16.0	17.6	7	4	10	14	3	2xM 3	1.66	13.9
R5146.080-022-12-05-04	m 0.8	22	17.6	19.2	5	4	10	12	3	2xM 3	1.37	12.5
R5146.080-022-14-07-04	m 0.8	22	17.6	19.2	7	4	10	14	3	2xM 3	1.91	16.2
R5146.080-024-12-05-05	m 0.8	24	19.2	20.8	5	5	15	12	4	2xM 4	1.55	18.6
R5146.080-024-14-07-05	m 0.8	24	19.2	20.8	7	5	15	14	4	2xM 4	2.17	22.9
R5146.080-025-12-05-05	m 0.8	25	20.0	21.6	5	5	15	12	4	2xM 4	1.64	19.6
R5146.080-025-14-07-05	m 0.8	25	20.0	21.6	7	5	15	14	4	2xM 4	2.30	24.2
R5146.080-028-12-05-05	m 0.8	28	22.4	24.0	5	5	15	12	4	2xM 4	1.92	22.7
R5146.080-028-14-07-05	m 0.8	28	22.4	24.0	7	5	15	14	4	2xM 4	2.69	28.7
R5146.080-030-12-05-05	m 0.8	30	24.0	25.6	5	5	15	12	4	2xM 4	2.11	25.0
R5146.080-030-14-07-05	m 0.8	30	24.0	25.6	7	5	15	14	4	2xM 4	2.95	31.9
R5146.080-032-14-05-05	m 0.8	32	25.6	27.2	5	5	15	14	4	2xM 4	2.30	30.0
R5146.080-036-14-05-06	m 0.8	36	28.8	30.4	5	6	18	14	4	2xM 4	2.68	39.9
R5146.080-040-14-05-06	m 0.8	40	32.0	33.6	5	6	18	14	4	2xM 4	3.08	45.9
R5146.080-045-14-05-06	m 0.8	45	36.0	37.6	5	6	18	14	4	2xM 4	3.57	54.4
R5146.080-048-14-05-06	m 0.8	48	38.4	40.0	5	6	18	14	4	2xM 4	3.87	59.9
R5146.080-050-14-05-06	m 0.8	50	40.0	41.6	5	6	18	14	4	2xM 4	4.07	63.9
R5146.080-054-14-05-06	m 0.8	54	43.2	44.8	5	6	18	14	4	2xM 4	4.47	72.1
R5146.080-056-14-05-06	m 0.8	56	44.8	46.4	5	6	18	14	4	2xM 4	4.67	76.5
R5146.080-060-14-05-06	m 0.8	60	48.0	49.6	5	6	18	14	4	2xM 4	5.07	85.8
R5146.080-064-14-05-06	m 0.8	64	51.2	52.8	5	6	18	14	4	2xM 4	5.48	95.7
R5146.080-070-14-05-08	m 0.8	70	56.0	57.6	5	8	28	14	4	2xM 4	6.09	134.4
R5146.080-072-14-05-08	m 0.8	72	57.6	59.2	5	8	28	14	4	2xM 4	6.30	140.0
R5146.080-080-14-05-08	m 0.8	80	64.0	65.6	5	8	28	14	4	2xM 4	7.12	164.3
R5146.080-080-14-05-10	m 0.8	80	64.0	65.6	5	10	28	14	4	2xM 4	7.12	161.3

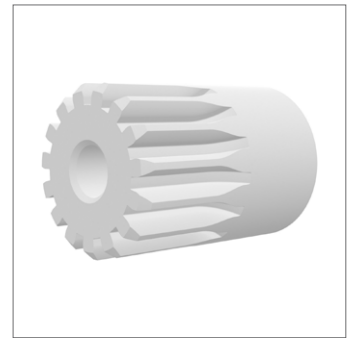
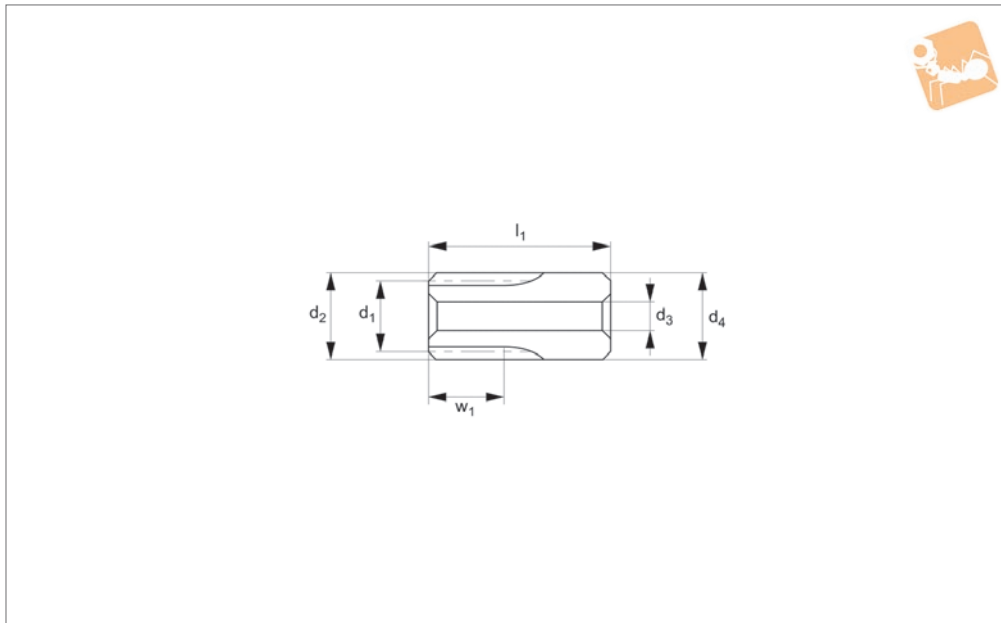


Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5146.080-090-14-05-08	m 0.8	90	72.0	73.6	5	8	28	14	4	2xM 4	8.14	198.1
R5146.080-100-14-05-08	m 0.8	100	80.0	81.6	5	8	28	14	4	2xM 4	9.17	236.0
R5146.080-100-14-05-10	m 0.8	100	80.0	81.6	5	10	28	14	4	2xM 4	9.17	233.0
R5146.080-120-14-05-08	m 0.8	120	96.0	97.6	5	8	30	14	4	2xM 4	11.24	330.0
R5146.080-120-14-05-10	m 0.8	120	96.0	97.6	5	10	30	14	4	2xM 4	11.24	327.1



Spur Gears - Module 0.8

white polyacetal - 14-15 teeth



R5148

STANDARD SPUR GEARS

Material

White polyacetal (PA; also known as polyoxymethylene/POM), machined. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling gears = 0,016 - 0,048mm.

Tips

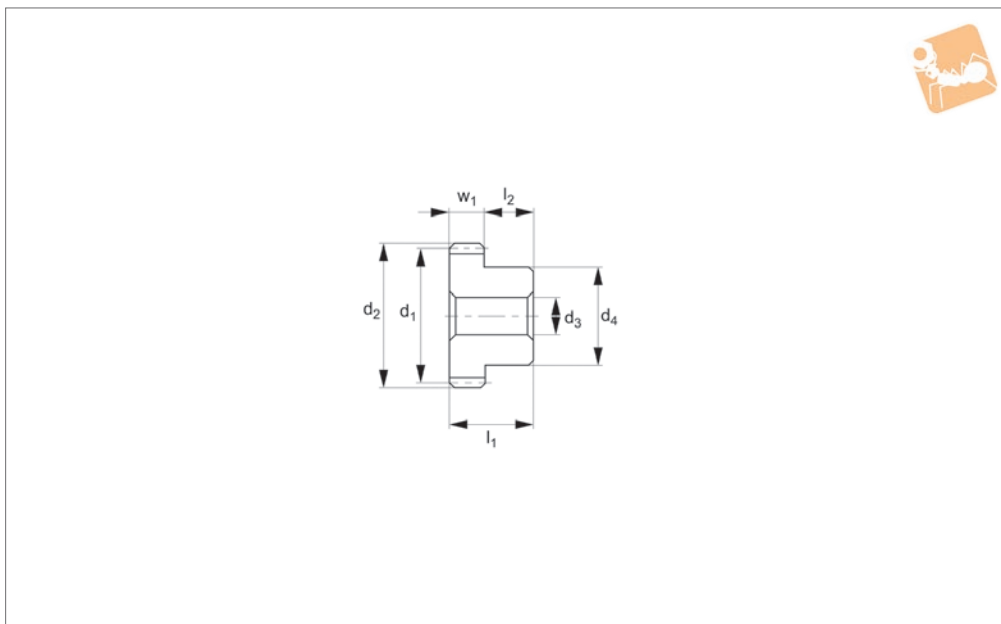
For module 0.8 white polyacetal gears with 16-120 teeth, see R5149. For versions with threaded holes for set screws, see R5150.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	Torque Nm max.	Weight g
R5148.080-014	m 0.8	14	11.2	12.8	7	4	12.8	20	0.48	3.0
R5148.080-015	m 0.8	15	12.0	13.6	7	4	13.6	20	0.51	3.4



R5149



Material

White polyacetal (PA, also known as polyoxymethylene/POM), machined. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,016 - 0,048mm.

Tips

For a version of this product with 14-15 teeth, see R5148. For white polyacetal module 0.8 gears with threaded holes for set screws, see R5152.

Max. allowable torque (Nm) is based on

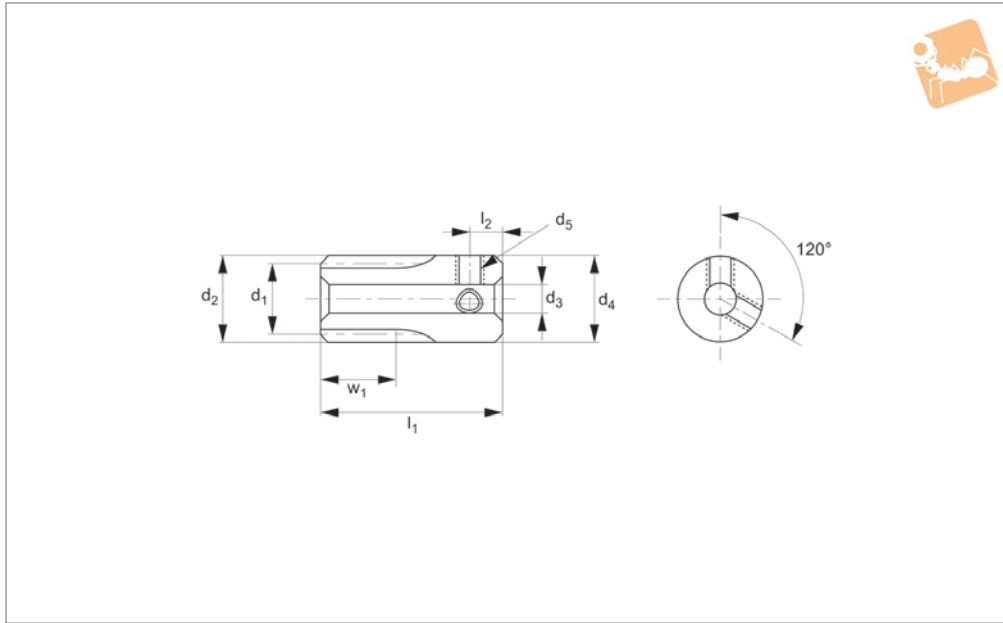
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5149.080-016	m 0.8	16	12.8	14.4	5	4	10.0	14	9	0.39	1.7
R5149.080-018	m 0.8	18	14.4	16.0	5	4	10.0	14	9	0.44	1.9
R5149.080-020	m 0.8	20	16.0	17.6	5	4	10.0	14	9	0.49	2.2
R5149.080-022	m 0.8	22	17.6	19.2	5	5	12.5	14	9	0.54	2.9
R5149.080-024	m 0.8	24	19.2	20.8	5	5	12.5	14	9	0.59	3.2
R5149.080-025	m 0.8	25	20.0	21.6	5	5	12.5	14	9	0.61	3.4
R5149.080-028	m 0.8	28	22.4	24.0	5	5	12.5	14	9	0.68	4.0
R5149.080-030	m 0.8	30	24.0	25.6	5	5	12.5	14	9	0.73	4.4
R5149.080-032	m 0.8	32	25.6	27.2	5	5	12.5	14	9	0.78	4.8
R5149.080-036	m 0.8	36	28.8	30.4	5	6	14.0	14	9	0.88	6.0
R5149.080-040	m 0.8	40	32.0	33.6	5	6	14.0	14	9	0.98	7.1
R5149.080-045	m 0.8	45	36.0	37.6	5	6	14.0	14	9	1.10	8.6
R5149.080-048	m 0.8	48	38.4	40.0	5	6	14.0	14	9	1.17	9.6
R5149.080-050	m 0.8	50	40.0	41.6	5	6	14.0	14	9	1.22	10.3
R5149.080-056	m 0.8	56	44.8	46.4	5	6	14.0	14	9	1.37	12.6
R5149.080-060	m 0.8	60	48.0	49.6	5	6	14.0	14	9	1.46	14.2
R5149.080-064	m 0.8	64	51.2	52.8	5	6	14.0	14	9	1.56	15.9
R5149.080-070	m 0.8	70	56.0	57.6	5	8	16.0	14	9	1.71	19.0
R5149.080-072	m 0.8	72	57.6	59.2	5	8	16.0	14	9	1.76	20.1
R5149.080-080	m 0.8	80	64.0	65.6	5	8	16.0	14	9	1.95	24.2
R5149.080-090	m 0.8	90	72.0	73.6	5	8	20.0	14	9	2.20	31.7
R5149.080-100	m 0.8	100	80.0	81.6	5	8	24.0	14	9	2.44	40.2
R5149.080-120	m 0.8	120	96.0	97.6	5	8	30.0	14	9	2.93	59.0



Spur Gears - Module 0.8 - Plastic

white polyacetal - set screw - 14-15 teeth



R5150

STANDARD SPUR GEARS

Material

White polyacetal (PA, also known as polyoxymethylene/POM), machined, with steel set screws. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.

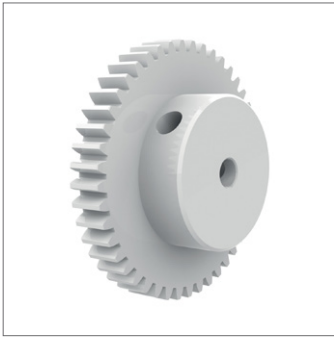
Amount of backlash when assembling gears = 0,016 - 0,048mm.

Tips

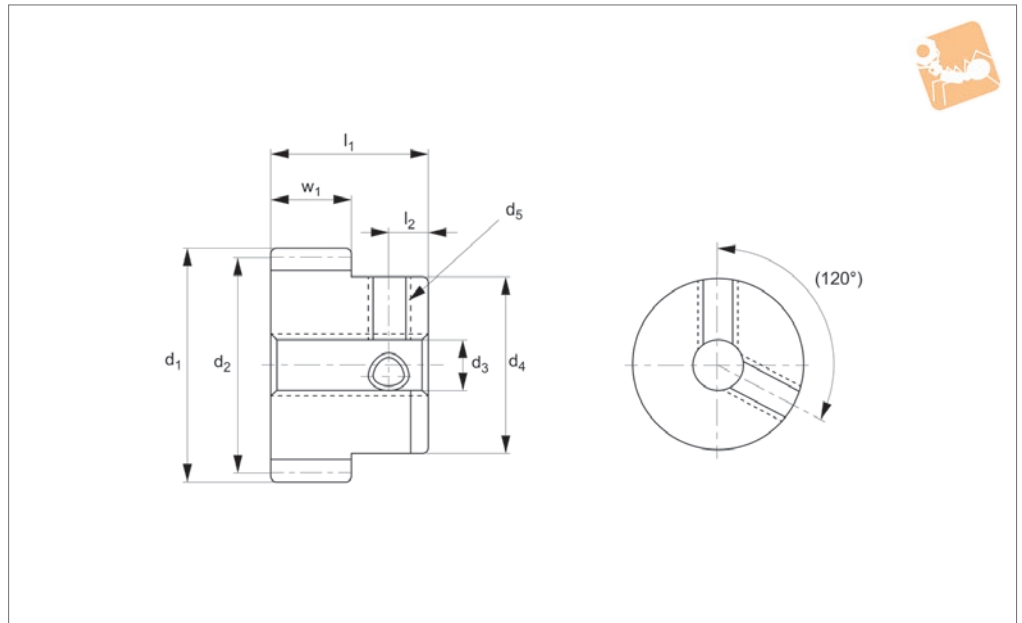
For module 0.8 white polyacetal gears with 16-120 teeth, see R5152.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5150.080-014	m 0.8	14	11.2	12.8	7	3	12.8	20	3	2xM 3	0.48	3.1
R5150.080-015	m 0.8	15	12.0	13.6	7	3	13.6	20	3	2xM 3	0.51	3.5



R5152



Material

White polyacetal (PA, also known as polyoxymethylene/POM), machined. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,016 - 0,048mm.

Tips

For module 0.8 white polyacetal gears with 14-15 teeth, see R5150. For versions of this product without threaded holes, see R5149 & R5150.

Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5152.080-016	m 0.8	16	12.8	14.4	5	3	10	12	4	2xM 3	0.39	1.5
R5152.080-018	m 0.8	18	14.4	16.0	5	3	12	12	4	2xM 3	0.44	2.1
R5152.080-020	m 0.8	20	16.0	17.6	5	3	12	12	4	2xM 3	0.49	2.4
R5152.080-022	m 0.8	22	17.6	19.2	5	3	15	12	4	2xM 3	0.54	3.3
R5152.080-024	m 0.8	24	19.2	20.8	5	3	16	12	4	2xM 3	0.59	3.9
R5152.080-025	m 0.8	25	20.0	21.6	5	3	16	12	4	2xM 3	0.61	4.0
R5152.080-028	m 0.8	28	22.4	24.0	5	3	20	12	4	2xM 3	0.68	5.7
R5152.080-030	m 0.8	30	24.0	25.6	5	3	20	12	4	2xM 3	0.73	6.1
R5152.080-032	m 0.8	32	25.6	27.2	5	3	20	12	4	2xM 3	0.78	6.6
R5152.080-036	m 0.8	36	28.8	30.4	5	4	22	12	4	2xM 4	0.88	8.1
R5152.080-040	m 0.8	40	32.0	33.6	5	4	22	12	4	2xM 4	0.98	9.2
R5152.080-045	m 0.8	45	36.0	37.6	5	4	22	12	4	2xM 4	1.10	10.7
R5152.080-048	m 0.8	48	38.4	40.0	5	4	22	12	4	2xM 4	1.17	11.7
R5152.080-050	m 0.8	50	40.0	41.6	5	4	22	12	4	2xM 4	1.22	12.4
R5152.080-056	m 0.8	56	44.8	46.4	5	4	22	12	4	2xM 4	1.37	14.6
R5152.080-060	m 0.8	60	48.0	49.6	5	4	22	12	4	2xM 4	1.46	16.3
R5152.080-064	m 0.8	64	51.2	52.8	5	4	22	12	4	2xM 4	1.56	18.0
R5152.080-070	m 0.8	70	56.0	57.6	5	5	24	12	4	2xM 4	1.71	21.5
R5152.080-072	m 0.8	72	57.6	59.2	5	5	24	12	4	2xM 4	1.76	22.5
R5152.080-080	m 0.8	80	64.0	65.6	5	5	24	12	4	2xM 4	1.95	26.8
R5152.080-090	m 0.8	90	72.0	73.6	5	5	24	12	4	2xM 4	2.20	32.8
R5152.080-100	m 0.8	100	80.0	81.6	5	5	24	12	4	2xM 4	2.44	39.5
R5152.080-120	m 0.8	120	96.0	97.6	5	5	24	12	4	2xM 4	2.93	55.1

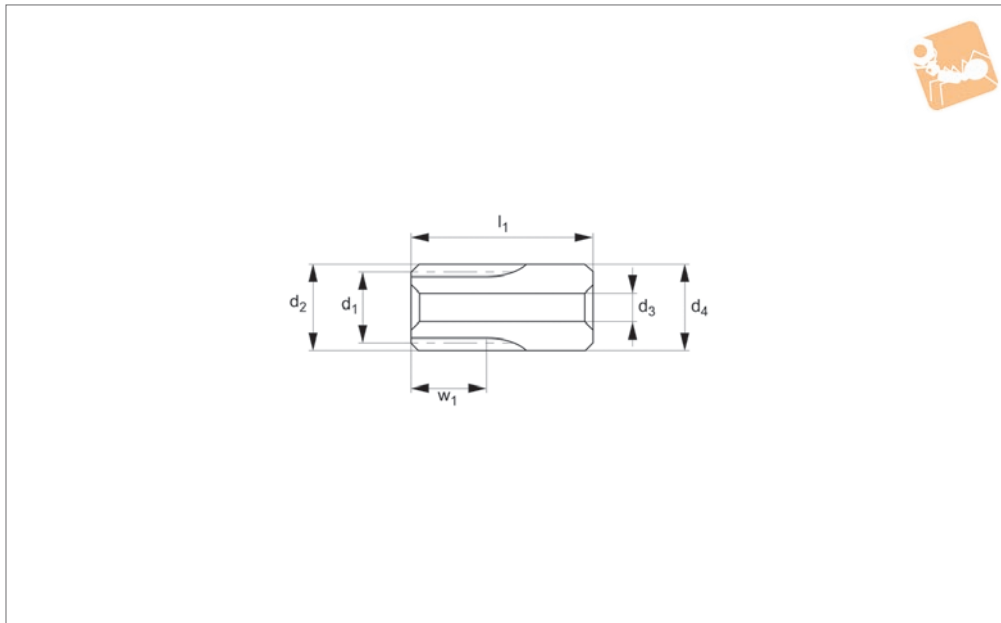


Spur Gears - Module 0.8 - Plastic

blue polyacetal - 14-15 teeth



Standard Spur Gears



R5156

STANDARD SPUR GEARS

Material

Blue polyacetal (PA, also known as polyoxymethylene/POM), machined. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,016 - 0,048mm.

Blue polyacetal machined gears are suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

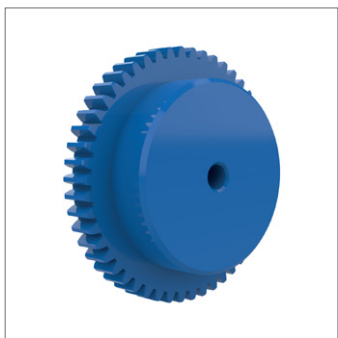
Tips

For module 0.8 blue polyacetal gears with

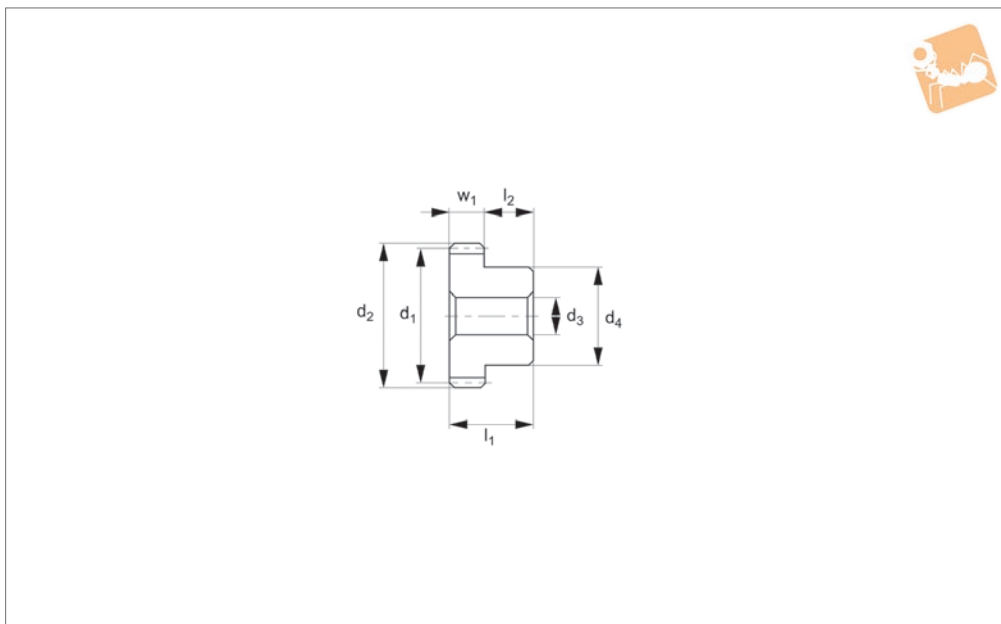
16-120 teeth, see R5157.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	Torque Nm max.	Weight g
R5156.080-014	m 0.8	14	11.2	12.8	7	3	12.8	20	0.48	3.1
R5156.080-015	m 0.8	15	12.0	13.6	7	3	13.6	20	0.51	3.6



R5157



Material

Blue polyacetal (PA, also known as polyoxymethylene/POM), machined. Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,016 - 0,048mm.

Blue polyacetal machined gears are suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

Tips

For module 0.8 blue polyacetal gears with

14-15 teeth, see R5156.

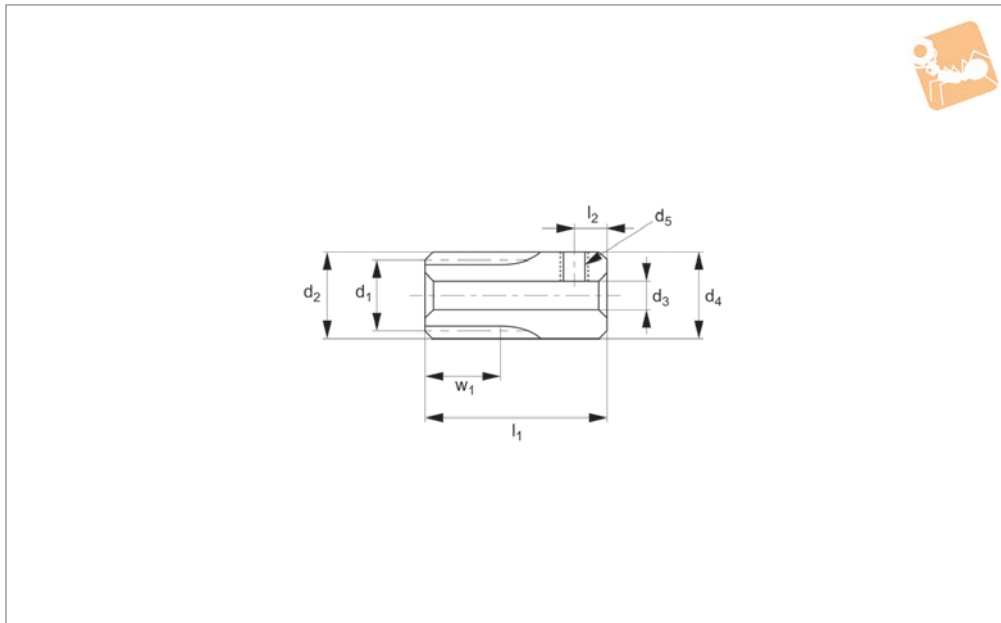
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5157.080-016	m 0.8	16	12.8	14.4	5	3	10.0	12	7	0.39	1.5
R5157.080-018	m 0.8	18	14.4	16.0	5	3	12.0	12	7	0.44	2.1
R5157.080-020	m 0.8	20	16.0	17.6	5	3	12.0	12	7	0.49	2.4
R5157.080-022	m 0.8	22	17.6	19.2	5	3	15.0	12	7	0.54	3.3
R5157.080-024	m 0.8	24	19.2	20.8	5	3	16.0	12	7	0.59	3.9
R5157.080-025	m 0.8	25	20.0	21.6	5	3	16.0	12	7	0.61	4.1
R5157.080-028	m 0.8	28	22.4	24.0	5	3	20.0	12	7	0.68	5.7
R5157.080-030	m 0.8	30	24.0	25.6	5	3	20.0	12	7	0.73	6.1
R5157.080-032	m 0.8	32	25.6	27.2	5	3	20.0	12	7	0.78	6.6
R5157.080-036	m 0.8	36	28.8	30.4	5	4	22.0	12	7	0.88	8.1
R5157.080-040	m 0.8	40	32.0	33.6	5	4	22.0	12	7	0.98	9.2
R5157.080-045	m 0.8	45	36.0	37.6	5	4	28.0	12	7	1.10	13.0
R5157.080-048	m 0.8	48	38.4	40.0	5	4	30.0	12	7	1.17	14.9
R5157.080-050	m 0.8	50	40.0	41.6	5	4	30.0	12	7	1.22	15.6
R5157.080-056	m 0.8	56	44.8	46.4	5	4	35.0	12	7	1.37	20.4
R5157.080-060	m 0.8	60	48.0	49.6	5	4	38.0	12	7	1.46	23.7
R5157.080-064	m 0.8	64	51.2	52.8	5	4	38.0	12	7	1.56	25.4
R5157.080-070	m 0.8	70	56.0	57.6	5	5	42.0	12	7	1.71	30.6
R5157.080-072	m 0.8	72	57.6	59.2	5	5	45.0	12	7	1.76	33.7
R5157.080-080	m 0.8	80	64.0	65.6	5	5	50.0	12	7	1.95	41.7
R5157.080-090	m 0.8	90	72.0	73.6	5	5	54.0	12	7	2.20	50.9
R5157.080-100	m 0.8	100	80.0	81.6	5	5	58.0	12	7	2.44	61.1
R5157.080-120	m 0.8	120	96.0	97.6	5	5	68.0	12	7	2.93	86.4



Spur Gears - Module 0.8

brass - 14-15 teeth



R5158

STANDARD SPUR GEARS

Material

Brass (C3604B). Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

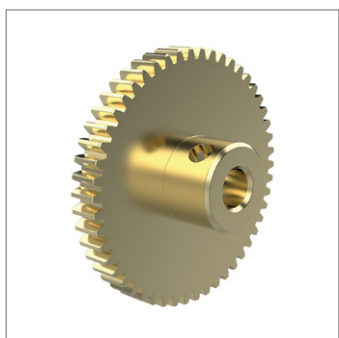
gears = 0,016 - 0,048mm.

Tips

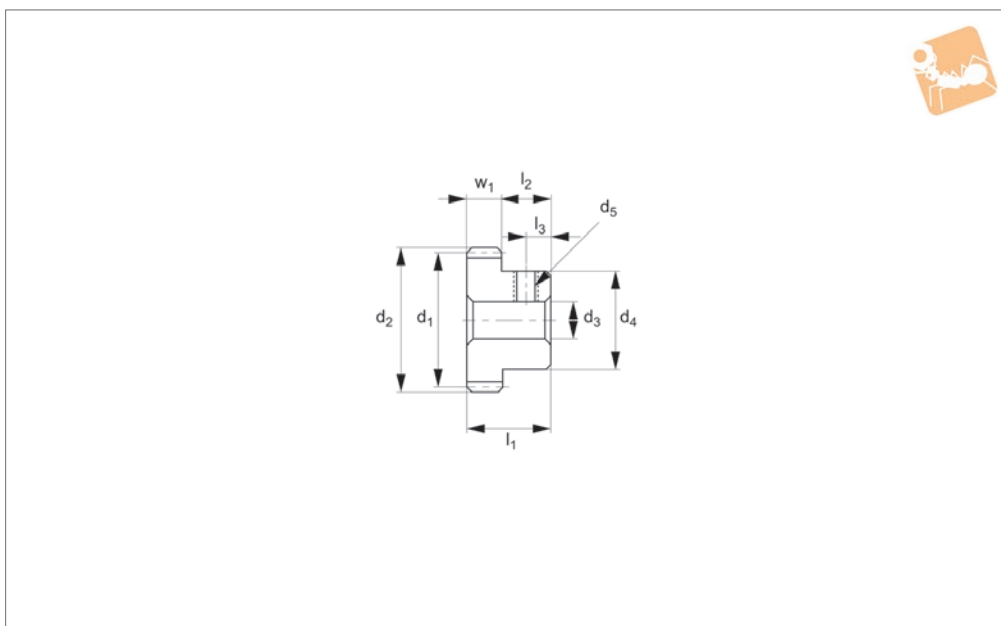
For module 0.8 brass gears with 16-120 teeth, see R5160.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5158.080-014	m 0.8	14	11.2	12.8	7	4	12.8	20	3	M 3	0.38	17.8
R5158.080-015	m 0.8	15	12.0	13.6	7	4	13.6	20	3	M 3	0.42	20.4



R5160



Material

Brass (C3604B).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling gears = 0,016 - 0,048mm.

Tips

For module 0.8 brass gears with 14-15 teeth see R5158.
Max. allowable torque (Nm) is based on

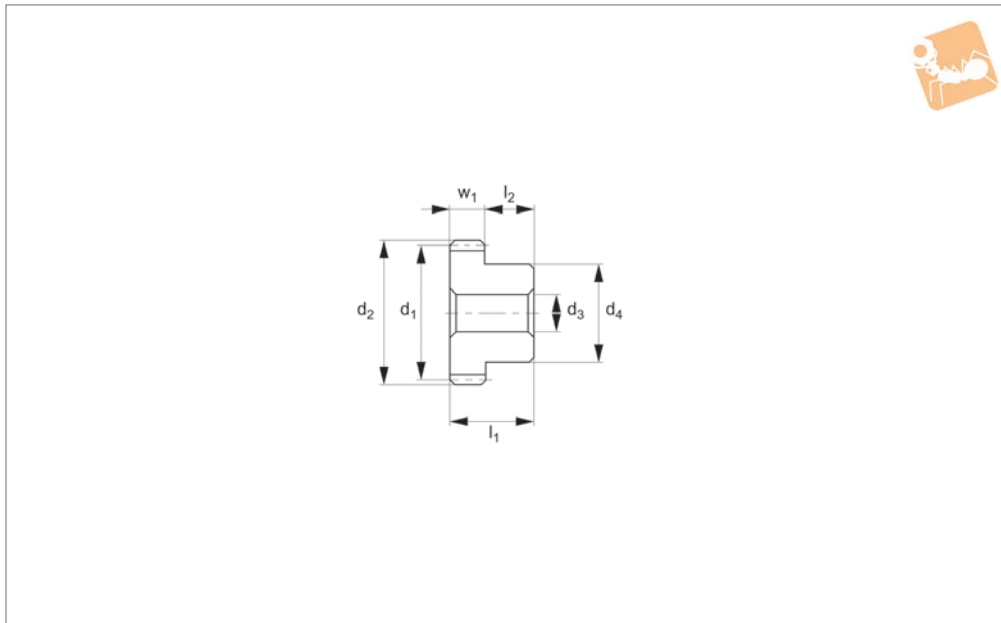
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5160.080-016-05	m 0.8	16	12.8	14.4	5	4	10.0	14	9	3	M 3	0.34	9.8
R5160.080-016-07	m 0.8	16	12.8	14.4	7	4	10.0	14	7	3	M 3	0.47	10.7
R5160.080-018-05	m 0.8	18	14.4	16.0	5	4	10.0	14	9	3	M 3	0.40	11.3
R5160.080-018-07	m 0.8	18	14.4	16.0	7	4	10.0	14	7	3	M 3	0.57	12.7
R5160.080-020-05	m 0.8	20	16.0	17.6	5	4	10.0	14	9	3	M 3	0.47	12.9
R5160.080-020-07	m 0.8	20	16.0	17.6	7	4	10.0	14	7	3	M 3	0.66	15.0
R5160.080-024-05	m 0.8	24	19.2	20.8	5	5	12.5	14	9	3	M 3	0.62	19.2
R5160.080-024-07	m 0.8	24	19.2	20.8	7	5	12.5	14	7	3	M 3	0.87	22.0
R5160.080-025-05	m 0.8	25	20.0	21.6	5	5	12.5	14	9	3	M 3	0.66	20.2
R5160.080-025-07	m 0.8	25	20.0	21.6	7	5	12.5	14	7	3	M 3	0.92	23.5
R5160.080-028-05	m 0.8	28	22.4	24.0	5	5	12.5	14	9	3	M 3	0.77	23.6
R5160.080-028-07	m 0.8	28	22.4	24.0	7	5	12.5	14	7	3	M 3	1.08	28.2
R5160.080-030-05	m 0.8	30	24.0	25.6	5	5	12.5	14	9	3	M 3	0.84	26.1
R5160.080-030-07	m 0.8	30	24.0	25.6	7	5	12.5	14	7	3	M 3	1.18	31.7
R5160.080-032-05	m 0.8	32	25.6	27.2	5	5	12.5	14	9	4	M 3	0.92	28.8
R5160.080-036-05	m 0.8	36	28.8	30.4	5	6	14.0	14	9	4	M 4	1.07	35.8
R5160.080-040-05	m 0.8	40	32.0	33.6	5	6	14.0	14	9	4	M 4	1.23	42.3
R5160.080-045-05	m 0.8	45	36.0	37.6	5	6	14.0	14	9	4	M 4	1.43	51.4
R5160.080-048-05	m 0.8	48	38.4	40.0	5	6	14.0	14	9	4	M 4	1.55	57.3
R5160.080-050-05	m 0.8	50	40.0	41.6	5	6	14.0	14	9	4	M 4	1.63	61.5
R5160.080-056-05	m 0.8	56	44.8	46.4	5	6	14.0	14	9	4	M 4	1.87	75.1
R5160.080-060-05	m 0.8	60	48.0	49.6	5	6	14.0	14	9	4	M 4	2.03	85.0
R5160.080-064-05	m 0.8	64	51.2	52.8	5	6	16.0	14	9	4	M 4	2.19	99.1
R5160.080-070-05	m 0.8	70	56.0	57.6	5	8	16.0	14	9	4	M 4	2.44	113.8
R5160.080-072-05	m 0.8	72	57.6	59.2	5	8	16.0	14	9	4	M 4	2.52	119.8
R5160.080-080-05	m 0.8	80	64.0	65.6	5	8	16.0	14	9	4	M 4	2.85	145.8
R5160.080-090-05	m 0.8	90	72.0	73.6	5	8	20.0	14	9	4	M 4	3.25	190.6
R5160.080-100-05	m 0.8	100	80.0	81.6	5	8	24.0	14	9	4	M 4	3.67	241.6
R5160.080-120-05	m 0.8	120	96.0	97.6	5	8	30.0	14	9	4	M 4	4.50	354.8



Spur Gears - Module 0.8

carbon steel - 25-120 teeth



R5161

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8,
(class 9 for hardened teeth versions). -H
Gear teeth surface induction-hardened to
47-53 HRC for increased durability.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling
gears = 0,016 - 0,048mm.

Tips

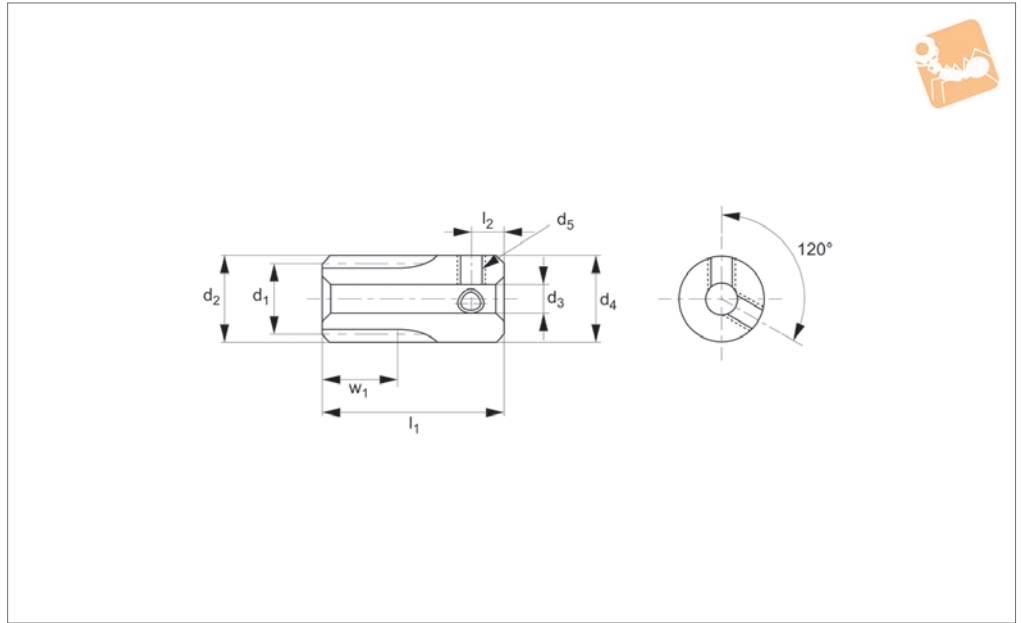
Max. allowable torque (Nm) is based on
standard operating conditions (see technical
pages) with a safety factor of 1.2. For
non standard applications apply a suitable
safety factor depending on frequency of

use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5161.080-025	m 0.8	25	20	21.6	8	5	16	18	10	5.27	32.5
R5161.080-025H	m 0.8	25	20	21.6	8	5	16	18	10	5.58	32.5
R5161.080-030	m 0.8	30	24	25.6	8	5	20	18	10	6.75	50.1
R5161.080-030H	m 0.8	30	24	25.6	8	5	20	18	10	7.16	50.1
R5161.080-040	m 0.8	40	32	33.6	8	6	25	18	10	9.82	84.7
R5161.080-040H	m 0.8	40	32	33.6	8	6	25	18	10	10.41	84.7
R5161.080-050	m 0.8	50	40	41.6	8	6	28	18	10	12.96	122.9
R5161.080-050H	m 0.8	50	40	41.6	8	6	28	18	10	13.73	122.9
R5161.080-060	m 0.8	60	48	49.6	8	6	34	18	10	16.14	180.5
R5161.080-060H	m 0.8	60	48	49.6	8	6	34	18	10	17.11	180.5
R5161.080-070	m 0.8	70	56	57.6	8	8 tol. H7	40	18	10	19.36	245.7
R5161.080-070H	m 0.8	70	56	57.6	8	8	40	18	10	20.53	245.7
R5161.080-080	m 0.8	80	64	65.6	8	8 tol. H7	45	18	10	22.61	319.2
R5161.080-080H	m 0.8	80	64	65.6	8	8	45	18	10	23.97	319.2
R5161.080-090	m 0.8	90	72	73.6	8	8 tol. H7	50	18	10	25.83	402.1
R5161.080-090H	m 0.8	90	72	73.6	8	8	50	18	10	27.39	402.1
R5161.080-100	m 0.8	100	80	81.6	8	10 tol. H7	60	18	10	29.10	525.8
R5161.080-100H	m 0.8	100	80	81.6	8	10	60	18	10	30.85	525.8
R5161.080-120	m 0.8	120	96	97.6	8	10 tol. H7	70	18	10	35.65	744.7
R5161.080-120H	m 0.8	120	96	97.6	8	10	70	18	10	37.80	744.7



R5163



Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,06 - 0,12mm.

Tips

For stainless steel module 1 gears with 17-120 teeth, see R5165.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

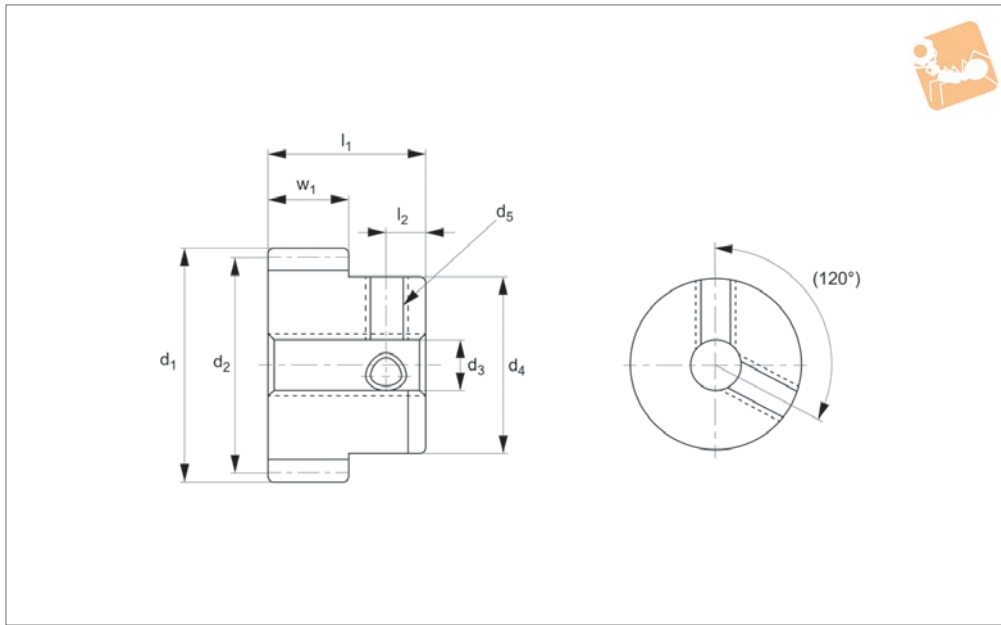
nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H8	d_4	l_1	l_2	Thread d_5	Torque Nm max.	Weight g
R5163.100-014	m 1	14	14	16	8	6	16	25	4	2xM 4	1.69	30.4
R5163.100-015	m 1	15	15	17	8	6	17	25	4	2xM 4	1.89	35.3
R5163.100-016	m 1	16	16	18	8	6	18	25	4	2xM 4	2.10	40.5



Spur Gears - Module 1

stainless steel - 17-120 teeth



R5165

STANDARD SPUR GEARS

Material

Stainless steel (SUS 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,06 - 0,12mm.

Tips

For stainless steel module 1 gears with 14-16 teeth, see R5163.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5165.100-017-08	m 1	17	17	19	8	6	14	16	4	2xM 4	2.31	19.9
R5165.100-018-08	m 1	18	18	20	8	6	14	16	4	2xM 4	2.53	21.7
R5165.100-018-10	m 1	18	18	20	10	6	14	20	4	2xM 4	3.16	27.2
R5165.100-020-08	m 1	20	20	22	8	6	16	16	4	2xM 4	2.97	28.3
R5165.100-020-10	m 1	20	20	22	10	6	16	20	4	2xM 4	3.71	35.5
R5165.100-021-08	m 1	21	21	23	8	6	18	16	4	2xM 4	3.19	33.5
R5165.100-022-08	m 1	22	22	24	8	6	18	16	4	2xM 4	3.41	35.7
R5165.100-024-08	m 1	24	24	26	8	6	18	16	4	2xM 4	3.87	40.3
R5165.100-024-10	m 1	24	24	26	10	6	18	20	4	2xM 4	4.84	50.6
R5165.100-025-08	m 1	25	25	27	8	6	18	16	4	2xM 4	4.10	42.7
R5165.100-025-10	m 1	25	25	27	10	6	20	20	4	2xM 4	5.12	58.2
R5165.100-026-08	m 1	26	26	28	8	6	20	16	4	2xM 4	4.33	48.9
R5165.100-028-08	m 1	28	28	30	8	6	20	16	4	2xM 4	4.80	54.2
R5165.100-028-10	m 1	28	28	30	10	6	20	20	4	2xM 4	6.00	68.1
R5165.100-030-08	m 1	30	30	32	8	6	24	16	4	2xM 4	5.27	68.5
R5165.100-030-10	m 1	30	30	32	8	6	24	20	4	2xM 4	6.68	86.0
R5165.100-032-06	m 1	32	32	34	10	6	24	16	4	2xM 4	4.31	69.1
R5165.100-034-06	m 1	34	34	36	6	6	24	16	4	2xM 4	4.67	74.0
R5165.100-035-06	m 1	35	35	37	6	6	24	16	4	2xM 4	4.85	76.6
R5165.100-036-06	m 1	36	36	38	6	8	24	16	4	2xM 4	5.03	76.6
R5165.100-040-06	m 1	40	40	42	6	8	28	16	4	2xM 4	5.77	100.6
R5165.100-042-06	m 1	42	42	44	6	8	28	16	4	2xM 4	6.14	106.7
R5165.100-044-06	m 1	44	44	46	6	8	28	16	4	2xM 4	6.50	113.1
R5165.100-045-06	m 1	45	45	47	6	8	28	16	4	2xM 4	6.69	116.5
R5165.100-048-06	m 1	48	48	50	6	8	28	16	4	2xM 4	7.25	126.9
R5165.100-050-06	m 1	50	50	52	6	8	28	16	4	2xM 4	7.62	134.2
R5165.100-052-06	m 1	52	52	54	6	8	28	16	5	2xM 5	8.00	140.9
R5165.100-054-06	m 1	54	54	56	6	8	28	16	5	2xM 5	8.38	148.8
R5165.100-056-06	m 1	56	56	58	6	10	30	16	5	2xM 5	8.75	160.6
R5165.100-060-06	m 1	60	60	62	6	10	30	16	5	2xM 5	9.51	178.0

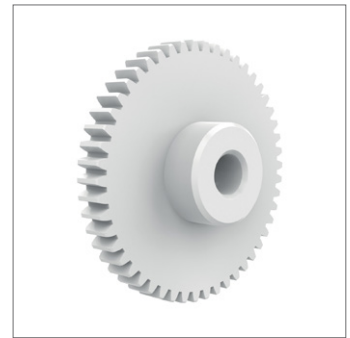
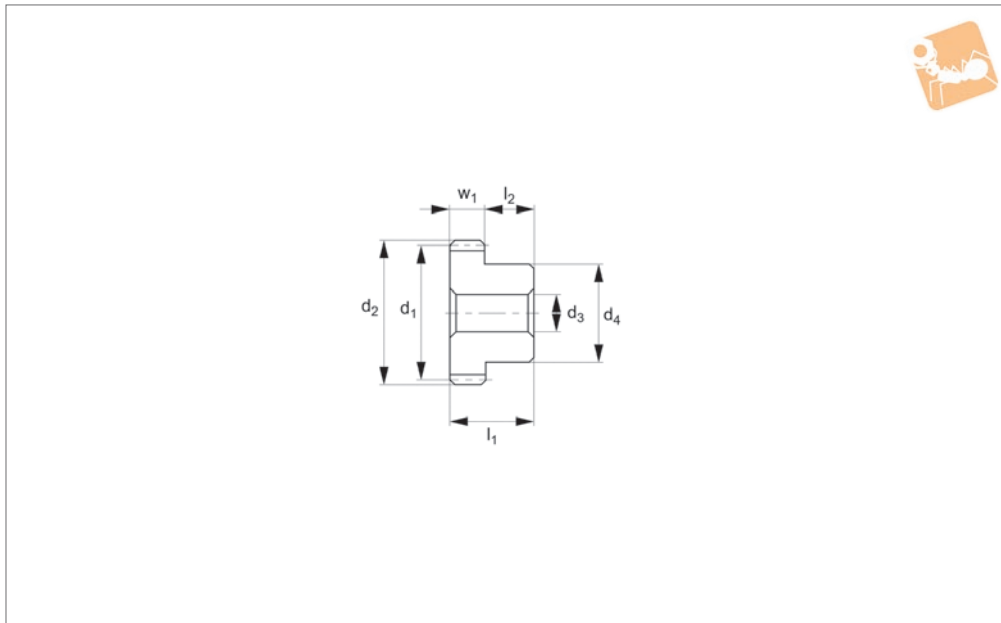


Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5165.100-064-06	m 1	64	64	66	6	10	30	16	5	2xM 5	10.27	196.5
R5165.100-070-06	m 1	70	70	72	6	10	30	16	5	2xM 5	11.42	226.6
R5165.100-072-06	m 1	72	72	74	6	10	30	16	5	2xM 5	11.80	237.2
R5165.100-080-06	m 1	80	80	82	6	10	30	16	5	2xM 5	13.34	282.6
R5165.100-090-06	m 1	90	90	92	6	10	30	16	5	2xM 5	15.26	346.1
R5165.100-100-06	m 1	100	100	102	6	10	30	16	5	2xM 5	17.19	417.1
R5165.100-120-06	m 1	120	120	122	6	10	30	16	5	2xM 5	21.08	581.6



Spur Gears - Module 1 - Plastic

white polyacetal - 17-120 teeth



R5166

STANDARD SPUR GEARS

Material

White polyacetal (PA, also known as polyoxymethylene/POM), machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling gears = 0,06 - 0,12mm.

Tips

For module 1 white polyacetal gears with set screws see R5169 & R5170. Max. allowable torque (Nm) is based on standard

operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5166.100-017	m 1	17	17	19	8	6	14	16	8	0.80	3.7
R5166.100-018	m 1	18	18	20	8	8	15	16	8	0.84	3.7
R5166.100-020	m 1	20	20	22	8	8	16	16	8	0.94	4.7
R5166.100-022	m 1	22	22	24	8	8	18	16	8	1.03	6.0
R5166.100-023	m 1	23	23	25	8	8	18	16	8	1.08	6.4
R5166.100-024	m 1	24	24	26	8	8	18	16	8	1.12	6.8
R5166.100-025	m 1	25	25	27	8	8	18	16	8	1.17	7.3
R5166.100-026	m 1	26	26	28	8	8	20	16	8	1.22	8.4
R5166.100-028	m 1	28	28	30	8	8	20	16	8	1.31	9.4
R5166.100-030	m 1	30	30	32	8	8	20	16	8	1.40	10.4
R5166.100-032	m 1	32	32	34	6	8	20	14	8	2.00	9.4
R5166.100-034	m 1	34	34	36	6	8	20	14	8	2.13	10.2
R5166.100-035	m 1	35	35	37	6	8	20	14	8	2.19	10.7
R5166.100-036	m 1	36	36	38	6	8	20	14	8	2.25	11.2
R5166.100-038	m 1	38	38	40	6	8	20	14	8	2.38	12.2
R5166.100-040	m 1	40	40	42	6	8	20	14	8	2.50	13.2
R5166.100-042	m 1	42	42	44	6	8	20	14	8	2.63	14.3
R5166.100-044	m 1	44	44	46	6	8	20	14	8	2.75	15.4
R5166.100-045	m 1	45	45	47	6	8	20	14	8	2.91	16.0
R5166.100-048	m 1	48	48	50	6	8	20	14	8	3.00	17.9
R5166.100-050	m 1	50	50	52	6	8	20	14	8	3.13	19.2
R5166.100-052	m 1	52	52	54	6	8	20	14	8	3.25	20.5
R5166.100-055	m 1	55	55	57	6	8	20	14	8	3.44	22.7
R5166.100-056	m 1	56	56	58	6	8	20	14	8	3.50	23.4
R5166.100-060	m 1	60	60	62	6	8	20	14	8	3.75	26.5
R5166.100-064	m 1	64	64	66	6	8	20	14	8	4.00	29.8
R5166.100-070	m 1	70	70	72	6	8	20	14	8	4.38	35.1
R5166.100-072	m 1	72	72	74	6	8	20	14	8	4.50	37.0
R5166.100-080	m 1	80	80	82	6	8	20	14	8	5.00	45.1
R5166.100-090	m 1	90	90	92	6	8	30	14	8	5.62	60.8

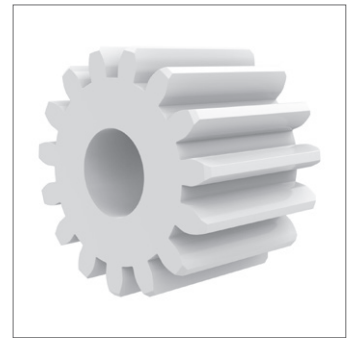
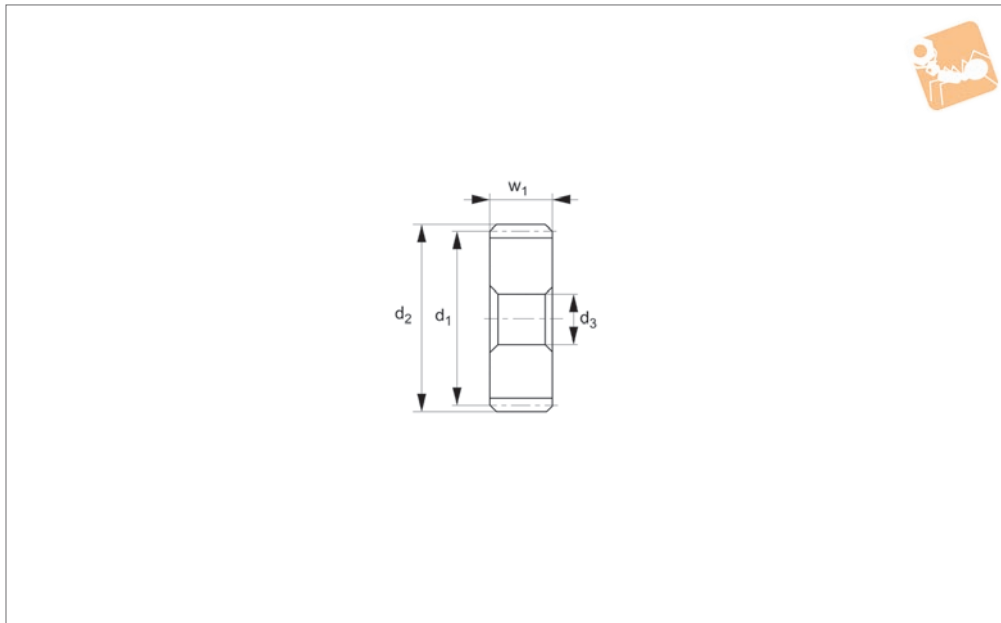


Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5166.100-100	m 1	100	100	102	6	8	30	14	8	6.25	73.4
R5166.100-120	m 1	120	120	122	6	8	30	14	8	7.49	102.7



Spur Gears - Module 1 - Plastic

white polyacetal - 12-16 teeth



R5167

STANDARD SPUR GEARS

Material

White polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.

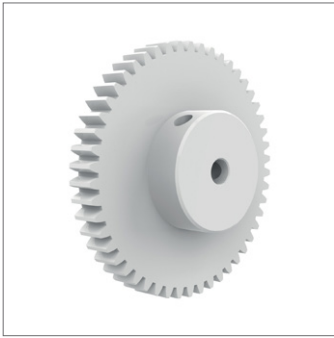
Amount of backlash when assembling gears = 0,06 - 0,12mm.

Tips

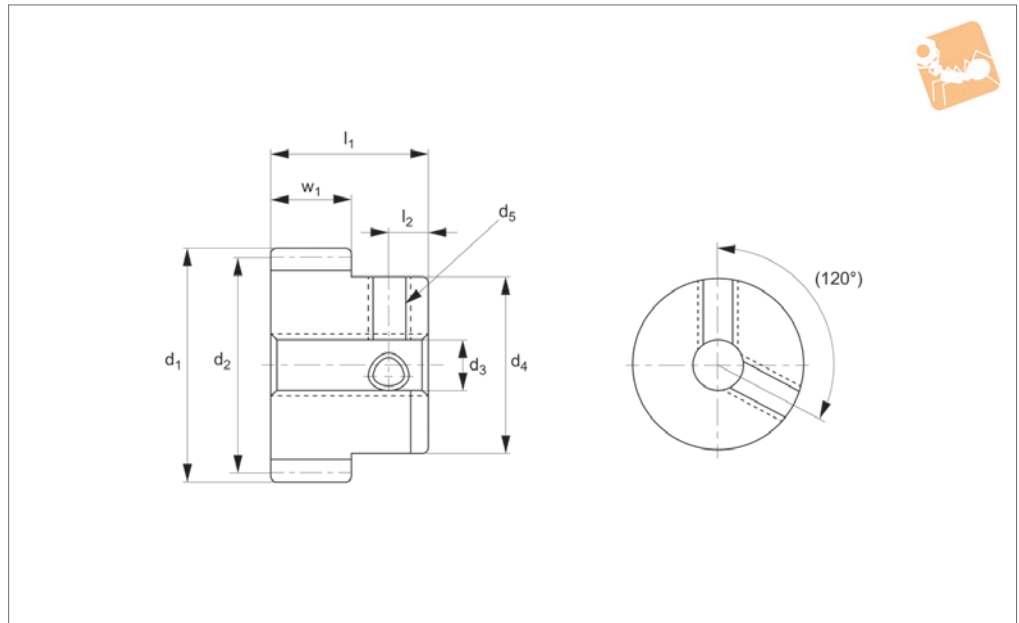
Module 1 for gears with 17-120 teeth see R5169. Max. allowable torque (Nm) is

based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	Torque Nm max.	Weight g
R5167.100-012	m 1	12	12	14	12	6	0.84	1.4
R5167.100-014	m 1	14	14	16	12	6	0.98	2.1
R5167.100-015	m 1	15	15	17	12	6	1.05	2.5
R5167.100-016	m 1	16	16	18	12	6	1.12	2.9



R5169



Material

White polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9 - 10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,06-0,12mm.

Tips

Module 1 for gears with 12-16 teeth see R5167.

Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H9	d_4	l_1	l_2	Thread d_5	Torque Nm max.	Weight g
R5169.100-017	m 1	17	17	19	8	4	14	16	4	2xM 4	0.80	4.0
R5169.100-018	m 1	18	18	20	8	4	15	16	4	2xM 4	0.84	4.5
R5169.100-020	m 1	20	20	22	8	5	16	16	4	2xM 4	0.94	5.3
R5169.100-022	m 1	22	22	24	8	5	18	16	4	2xM 4	1.03	6.7
R5169.100-023	m 1	23	23	25	8	5	20	16	4	2xM 4	1.08	7.7
R5169.100-024	m 1	24	24	26	8	5	20	16	4	2xM 4	1.12	8.2
R5169.100-025	m 1	25	25	27	8	5	22	16	4	2xM 4	1.17	9.3
R5169.100-026	m 1	26	26	28	8	5	22	16	4	2xM 4	1.22	9.8
R5169.100-028	m 1	28	28	30	8	5	24	16	4	2xM 4	1.31	11.6
R5169.100-030	m 1	30	30	32	8	5	24	16	4	2xM 4	1.40	12.6
R5169.100-032	m 1	32	32	34	6	5	24	14	4	2xM 4	2.00	11.5
R5169.100-034	m 1	34	34	36	6	5	24	14	4	2xM 4	2.13	12.4
R5169.100-035	m 1	35	35	37	6	5	24	14	4	2xM 4	2.19	12.8
R5169.100-036	m 1	36	36	38	6	5	24	14	4	2xM 4	2.25	13.3
R5169.100-038	m 1	38	38	40	6	5	24	14	4	2xM 4	2.38	14.3
R5169.100-040	m 1	40	40	42	6	5	24	14	4	2xM 4	2.50	15.3
R5169.100-042	m 1	42	42	44	6	5	24	14	4	2xM 4	2.63	16.4
R5169.100-044	m 1	44	44	46	6	5	24	14	4	2xM 4	2.75	17.5
R5169.100-045	m 1	45	45	47	6	5	24	14	4	2xM 4	2.91	18.1
R5169.100-048	m 1	48	48	50	6	5	24	14	4	2xM 4	3.00	20.0
R5169.100-050	m 1	50	50	52	6	5	24	14	4	2xM 4	3.13	21.3
R5169.100-052	m 1	52	52	54	6	5	24	14	4	2xM 4	3.25	22.6
R5169.100-055	m 1	55	55	57	6	5	24	14	4	2xM 4	3.44	24.8
R5169.100-056	m 1	56	56	58	6	5	24	14	4	2xM 4	3.50	25.5
R5169.100-060	m 1	60	60	62	6	5	24	14	4	2xM 4	3.75	28.6
R5169.100-064	m 1	64	64	66	6	5	24	14	4	2xM 4	4.00	31.9
R5169.100-070	m 1	70	70	72	6	5	24	14	4	2xM 4	4.38	37.2
R5169.100-072	m 1	72	72	74	6	5	24	14	4	2xM 4	4.50	39.1
R5169.100-080	m 1	80	80	82	6	5	24	14	4	2xM 4	5.00	47.2
R5169.100-090	m 1	90	90	92	6	5	24	14	4	2xM 4	5.62	58.5



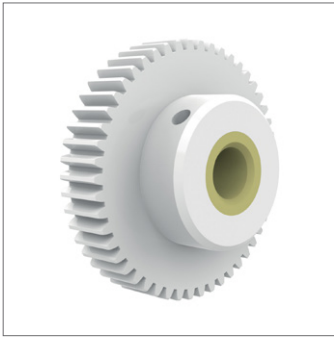
Spur Gears - Module 1 - Plastic

white polyacetal - set screw - 17-120 teeth

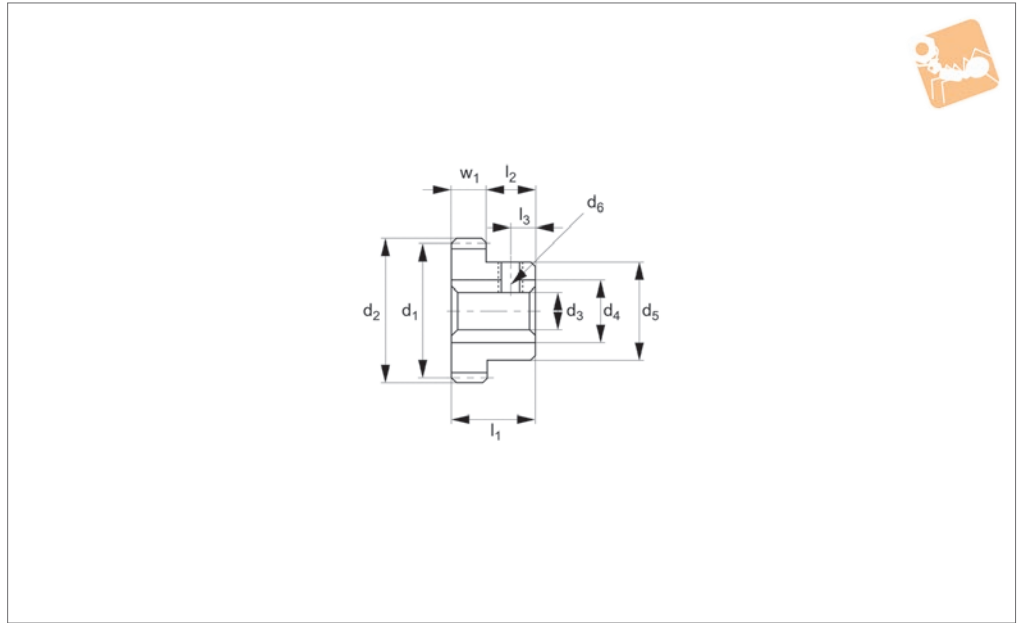


Standard Spur Gears

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H9	d_4	l_1	l_2	Thread d_5	Torque Nm max.	Weight g
R5169.100-100	m 1	100	100	102	6	5	24	14	4	2xM 4	6.25	71.1
R5169.100-120	m 1	120	120	122	6	5	24	14	4	2xM 4	7.49	100.4



R5170



Material

White polyacetal, with brass bushing.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.

Amount of backlash when assembling gears = 0,06 - 0,12mm.

Tips

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

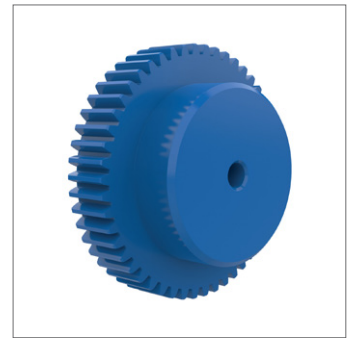
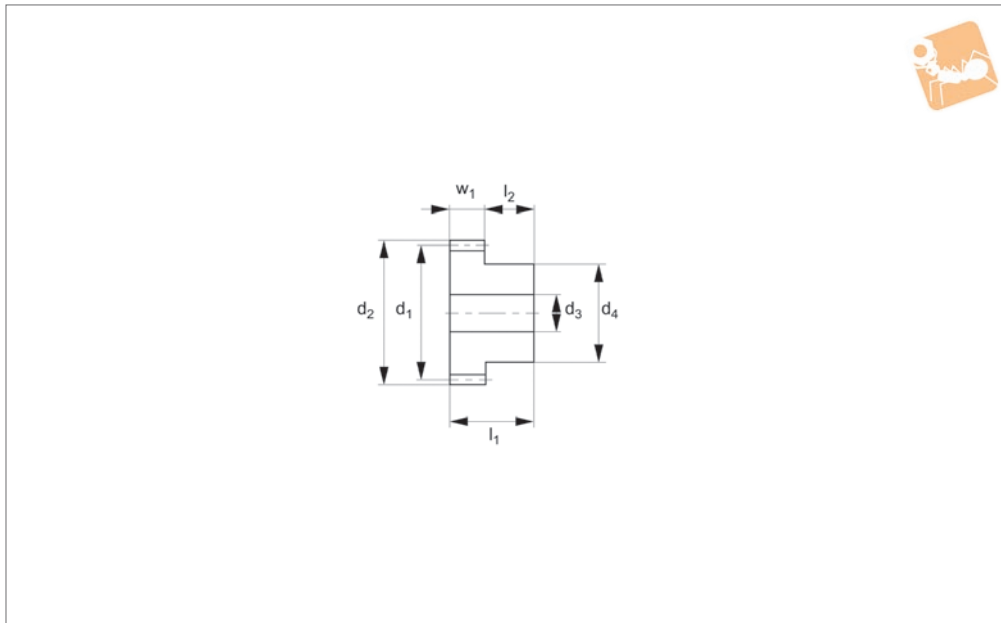
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	d ₆	l ₁	l ₂	l ₃	Thread d ₅	Torque Nm max.	Weight g
R5170.100-020	m 1	20	20	22	10	8	16	12	20	10	4	M 4	1.54	16.8
R5170.100-024	m 1	24	24	26	10	8	20	12	20	10	4	M 4	1.84	17.5
R5170.100-025	m 1	25	25	27	10	8	20	12	20	10	4	M 4	1.92	18.0
R5170.100-028	m 1	28	28	30	10	10	24	16	20	10	4	M 4	2.15	35.0
R5170.100-030	m 1	30	30	32	10	10	24	16	20	10	4	M 4	2.30	36.4
R5170.100-032	m 1	32	32	34	10	10	24	16	20	10	4	M 4	2.46	37.8
R5170.100-036	m 1	36	36	38	10	10	30	16	20	10	4	M 4	2.76	38.0
R5170.100-040	m 1	40	40	42	10	10	30	16	20	10	4	M 4	3.07	41.4
R5170.100-045	m 1	45	45	47	10	10	30	16	20	10	4	M 4	3.45	46.1
R5170.100-048	m 1	48	48	50	10	10	30	16	20	10	4	M 4	3.68	49.2
R5170.100-050	m 1	50	50	52	10	10	30	16	20	10	4	M 4	3.84	51.4
R5170.100-056	m 1	56	56	58	10	10	30	16	20	10	4	M 4	4.29	58.5
R5170.100-060	m 1	60	60	62	10	10	30	16	20	10	4	M 4	4.60	63.7
R5170.100-064	m 1	64	64	66	10	10	30	16	20	10	4	M 4	4.91	69.2
R5170.100-070	m 1	70	70	72	10	10	30	16	20	10	4	M 4	5.37	78.2
R5170.100-072	m 1	72	72	74	10	10	30	16	20	10	4	M 4	5.52	81.4
R5170.100-080	m 1	80	80	82	10	10	30	16	20	10	4	M 4	6.13	94.9
R5170.100-090	m 1	90	90	92	10	10	30	16	20	10	4	M 4	6.89	113.9
R5170.100-100	m 1	100	100	102	10	10	30	16	20	10	4	M 4	7.66	135.1
R5170.100-120	m 1	120	120	122	10	10	30	16	20	10	4	M 4	9.18	184.1



Spur Gears - Module 1 - Plastic

blue polyacetal - 12-120 teeth



R5172

STANDARD SPUR GEARS

Material

Blue polyacetal, machined.
Accuracy to JIS B 1702-1 (ISO) class 9 - 10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,06 - 0,12mm.

Blue polyacetal machined gears are suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

Tips

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5172.100-012	m 1	12	12	14	10	4	8	20	10	0.69	1.9
R5172.100-014	m 1	14	14	16	10	4	10	20	10	0.92	2.9
R5172.100-015	m 1	15	15	17	10	4	10	20	10	1.02	3.2
R5172.100-016	m 1	16	16	18	10	4	12	20	10	1.12	4.0
R5172.100-017	m 1	17	17	19	10	4	14	20	10	1.21	5.0
R5172.100-018	m 1	18	18	20	10	4	15	20	10	1.31	5.7
R5172.100-020	m 1	20	20	22	10	5	16	20	10	1.54	6.6
R5172.100-022	m 1	22	22	24	10	5	18	20	10	1.61	8.3
R5172.100-023	m 1	23	23	25	10	5	20	20	10	1.71	9.7
R5172.100-024	m 1	24	24	26	10	5	20	20	10	1.84	10.2
R5172.100-025	m 1	25	25	27	10	5	22	20	10	1.92	11.6
R5172.100-026	m 1	26	26	28	10	5	22	20	10	1.99	12.2
R5172.100-028	m 1	28	28	30	10	5	24	20	10	2.15	14.4
R5172.100-030	m 1	30	30	32	10	5	24	20	10	2.30	15.7
R5172.100-032	m 1	32	32	34	10	5	24	20	10	2.46	17.1
R5172.100-034	m 1	34	34	36	10	5	24	20	10	2.67	18.5
R5172.100-035	m 1	35	35	37	10	5	24	20	10	2.59	19.3
R5172.100-036	m 1	36	36	38	10	5	26	20	10	2.76	21.2
R5172.100-038	m 1	38	38	40	10	5	28	20	10	2.94	24.0
R5172.100-040	m 1	40	40	42	10	5	30	20	10	3.07	27.0
R5172.100-042	m 1	42	42	44	10	5	30	20	10	3.21	28.8
R5172.100-044	m 1	44	44	46	10	5	32	20	10	3.39	32.1
R5172.100-045	m 1	45	45	47	10	5	32	20	10	3.45	33.1
R5172.100-048	m 1	48	48	50	10	5	36	20	10	3.68	39.2
R5172.100-050	m 1	50	50	52	10	5	36	20	10	3.84	41.4
R5172.100-052	m 1	52	52	54	10	5	40	20	10	4.03	47.0
R5172.100-055	m 1	55	55	57	10	5	40	20	10	4.23	50.5
R5172.100-056	m 1	56	56	58	10	5	40	20	10	4.29	51.7
R5172.100-060	m 1	60	60	62	10	5	46	20	10	4.60	62.6

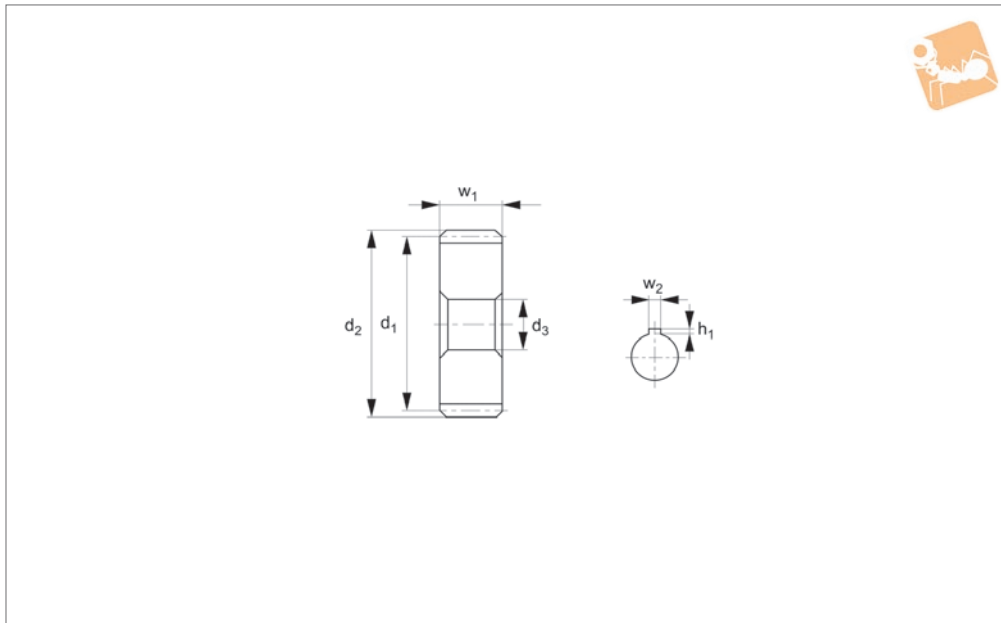


Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5172.100-064	m 1	64	64	66	10	5	48	20	10	4.91	70.2
R5172.100-065	m 1	65	65	67	10	5	48	20	10	4.97	71.6
R5172.100-070	m 1	70	70	72	10	5	52	20	10	5.37	83.5
R5172.100-072	m 1	72	72	74	10	5	52	20	10	5.52	86.6
R5172.100-075	m 1	75	75	77	10	5	52	20	10	5.81	91.5
R5172.100-080	m 1	80	80	82	10	5	58	20	10	6.13	107.4
R5172.100-085	m 1	85	85	87	10	5	62	20	10	6.44	121.8
R5172.100-090	m 1	90	90	92	10	5	65	20	10	6.89	135.7
R5172.100-100	m 1	100	100	102	10	5	70	20	10	7.66	164.0
R5172.100-120	m 1	120	120	122	10	5	84	20	10	9.18	236.8



Spur Gears - Module 1

carbon steel - 14-68 teeth



R5173

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,04 - 0,10mm.

Tips

Module 1 for gears with 8-10 teeth see R5175 & R5176, for gears with 12-18 teeth see R5177, for gears with 14-120 teeth with set screw see R5179.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Keyway (w ₂ x h ₁)	Torque Nm max.	Weight g
R5173.100-050-06-10	m 1	50	50	52	6	10	-	14.32	89
R5173.100-050-06-12	m 1	50	50	52	6	12	4x1,8	14.32	87
R5173.100-050-10-08	m 1	50	50	52	10	8	-	24.83	151
R5173.100-050-10-10	m 1	50	50	52	10	10	3x1,4	24.83	148
R5173.100-050-10-12	m 1	50	50	52	10	12	4x1,8	24.83	145
R5173.100-050-10-15	m 1	50	50	52	10	15	5x2,3	24.83	140
R5173.100-052-06-10	m 1	52	52	54	6	10	-	15.28	97
R5173.100-052-10-10	m 1	52	52	54	10	10	-	25.78	161
R5173.100-054-06-10	m 1	54	54	56	6	10	-	16.23	105
R5173.100-054-10-10	m 1	54	54	56	10	10	-	27.69	174
R5173.100-055-06-10	m 1	55	55	57	6	10	-	16.23	109
R5173.100-055-10-10	m 1	55	55	57	10	10	-	27.69	181
R5173.100-056-06-10	m 1	56	56	58	6	10	-	17.19	113
R5173.100-056-06-12	m 1	56	56	58	6	12	4x1,8	17.19	111
R5173.100-056-10-10	m 1	56	56	58	10	10	-	28.65	188
R5173.100-056-10-12	m 1	56	56	58	10	12	4x1,8	28.65	184
R5173.100-056-10-15	m 1	56	56	58	10	15	5x2,3	28.65	179
R5173.100-058-06-10	m 1	58	58	60	6	10	-	18.14	115
R5173.100-058-10-10	m 1	58	58	60	10	10	-	29.60	196
R5173.100-060-06-10	m 1	60	60	62	6	10	-	18.14	130
R5173.100-060-06-12	m 1	60	60	62	6	12	4x1,8	18.14	128
R5173.100-060-10-10	m 1	60	60	62	10	10	-	31.51	216
R5173.100-060-10-10K	m 1	60	60	62	10	10	3x1,4	31.51	216
R5173.100-060-10-12	m 1	60	60	62	10	12	4x1,8	31.51	213
R5173.100-060-10-15	m 1	60	60	62	10	15	5x2,3	31.51	208
R5173.100-062-06-10	m 1	62	62	64	6	10	-	19.10	139
R5173.100-062-10-10	m 1	62	62	64	10	10	-	32.47	231
R5173.100-064-06-10	m 1	64	64	66	6	10	-	20.05	148
R5173.100-064-06-12	m 1	64	64	66	6	12	4x1,8	20.05	146
R5173.100-064-10-10	m 1	64	64	66	10	10	-	33.42	247



Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Keyway (w ₂ x h ₁)	Torque Nm max.	Weight g
R5173.100-064-10-12	m 1	64	64	66	10	12	4×1,8	33.42	244
R5173.100-064-10-15	m 1	64	64	66	10	15	5×2,3	33.42	238
R5173.100-065-06-10	m 1	65	65	67	6	10	-	20.05	153
R5173.100-065-10-10	m 1	65	65	67	10	10	-	34.38	255
R5173.100-066-06-10	m 1	66	66	68	6	10	-	21.01	158
R5173.100-066-10-10	m 1	66	66	68	10	10	-	35.33	263
R5173.100-068-06-10	m 1	68	68	70	6	10	-	21.96	168
R5173.100-068-10-10	m 1	68	68	70	10	10	-	36.29	279
R5173.100-030-08-08	m 1	30	30	32	8	8	-	10.54	42
R5173.100-030-08-10	m 1	30	30	32	8	10	3×1,4	10.54	40
R5173.100-030-10-10	m 1	30	30	32	10	10	3×1,4	13.19	49
R5173.100-030-12-08	m 1	30	30	32	12	8	-	15.81	62
R5173.100-030-12-10	m 1	30	30	32	12	10	3×1,4	15.81	59
R5173.100-030-12-12	m 1	30	30	32	12	12	4×1,8	15.81	56
R5173.100-032-06-08	m 1	32	32	34	6	8	-	8.62	36
R5173.100-032-06-10	m 1	32	32	34	6	10	3×1,4	8.62	34
R5173.100-032-06-12	m 1	32	32	34	6	12	4×1,8	8.62	33
R5173.100-032-10-08	m 1	32	32	34	10	8	-	14.37	60
R5173.100-032-10-10	m 1	32	32	34	10	10	3×1,4	14.37	57
R5173.100-032-10-12	m 1	32	32	34	10	12	4×1,8	14.37	54
R5173.100-034-06-08	m 1	34	34	36	6	8	-	9.34	41
R5173.100-034-10-08	m 1	34	34	36	10	8	-	15.57	68
R5173.100-035-06-08	m 1	35	35	37	6	8	-	9.70	43
R5173.100-035-06-10	m 1	35	35	37	6	10	3×1,4	9.70	42
R5173.100-035-06-12	m 1	35	35	37	6	12	4×1,8	9.70	40
R5173.100-035-10-08	m 1	35	35	37	10	8	-	16.17	72
R5173.100-035-10-10	m 1	35	35	37	10	10	3×1,4	16.17	69
R5173.100-035-10-12	m 1	35	35	37	10	12	4×1,8	16.17	67
R5173.100-035-10-15	m 1	35	35	37	10	15	5×2,3	16.17	61
R5173.100-036-06-08	m 1	36	36	38	6	8	-	10.07	46
R5173.100-036-06-10	m 1	36	36	38	6	10	3×1,4	10.07	44
R5173.100-036-06-12	m 1	36	36	38	6	12	4×1,8	10.07	43
R5173.100-036-10-08	m 1	36	36	38	10	8	-	16.78	76
R5173.100-036-10-10	m 1	36	36	38	10	10	3×1,4	16.78	74
R5173.100-036-10-12	m 1	36	36	38	10	12	4×1,8	16.78	71
R5173.100-036-10-15	m 1	36	36	38	10	15	5×2,3	16.78	66
R5173.100-038-06-08	m 1	38	38	40	6	8	-	10.80	52
R5173.100-038-10-08	m 1	38	38	40	10	8	-	18.00	86
R5173.100-040-06-08	m 1	40	40	42	6	8	-	11.53	57
R5173.100-040-06-10	m 1	40	40	42	6	10	3×1,4	11.53	56
R5173.100-040-06-12	m 1	40	40	42	6	12	4×1,8	11.53	54
R5173.100-040-10-08	m 1	40	40	42	10	8	-	19.18	95
R5173.100-040-10-10	m 1	40	40	42	10	10	3×1,4	19.18	93
R5173.100-040-10-12	m 1	40	40	42	10	12	4×1,8	19.18	90
R5173.100-040-10-15	m 1	40	40	42	10	15	5×2,3	19.18	84
R5173.100-042-06-08	m 1	42	42	44	6	8	-	12.27	63
R5173.100-042-10-08	m 1	42	42	44	10	8	-	20.45	105
R5173.100-044-06-08	m 1	44	44	46	6	8	-	13.01	70
R5173.100-044-10-08	m 1	44	44	46	10	8	-	21.68	116
R5173.100-045-06-08	m 1	45	45	47	6	8	-	13.38	73
R5173.100-045-06-10	m 1	45	45	47	6	10	3×1,4	13.38	71
R5173.100-045-06-12	m 1	45	45	47	6	12	4×1,8	13.38	70
R5173.100-045-10-08	m 1	45	45	47	10	8	-	22.30	121
R5173.100-045-10-10	m 1	45	45	47	10	10	3×1,4	22.30	119
R5173.100-045-10-12	m 1	45	45	47	10	12	4×1,8	22.30	116
R5173.100-045-10-15	m 1	45	45	47	10	15	5×2,3	22.30	111
R5173.100-046-06-08	m 1	46	46	48	6	8	-	13.75	76
R5173.100-046-10-10	m 1	46	46	48	10	10	-	22.92	125
R5173.100-048-06-08	m 1	48	48	50	6	8	-	14.32	83
R5173.100-048-06-10	m 1	48	48	50	6	10	3×1,4	14.32	82
R5173.100-048-06-12	m 1	48	48	50	6	12	4×1,8	14.32	80
R5173.100-048-10-10	m 1	48	48	50	10	10	-	23.87	136
R5173.100-048-10-12	m 1	48	48	50	10	12	4×1,8	23.87	133
R5173.100-048-10-15	m 1	48	48	50	10	15	5×2,3	23.87	128
R5173.100-014-08-05	m 1	14	14	16	8	5	-	3.38	9
R5173.100-014-08-06	m 1	14	14	16	8	6	-	3.38	8
R5173.100-014-12-06	m 1	14	14	16	12	6	-	5.07	12



Spur Gears - Module 1

carbon steel - 14-68 teeth



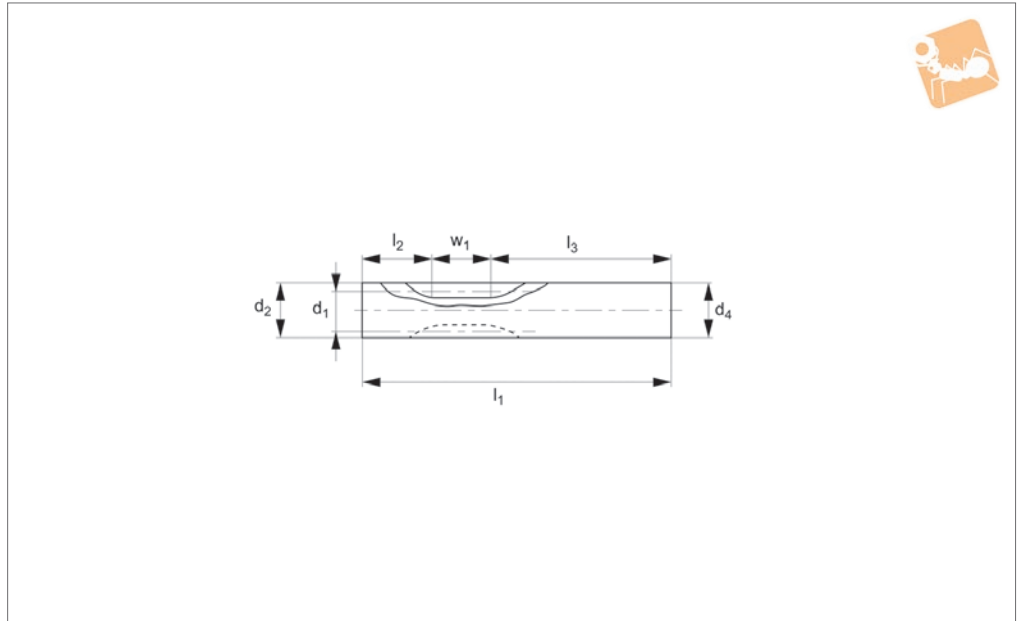
Standard Spur
Gears

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	Keyway ($w_2 \times h_1$)	Torque Nm max.	Weight g
R5173.100-015-08-05	m 1	15	15	17	8	5	-	3.79	10
R5173.100-015-08-06	m 1	15	15	17	8	6	-	3.79	10
R5173.100-015-12-06	m 1	15	15	17	12	6	-	5.68	14
R5173.100-016-08-05	m 1	16	16	18	8	5	-	4.21	12
R5173.100-016-08-06	m 1	16	16	18	8	6	-	4.21	11
R5173.100-016-12-08	m 1	16	16	18	12	8	-	6.31	15
R5173.100-017-08-05	m 1	17	17	19	8	5	-	4.63	13
R5173.100-017-12-08	m 1	17	17	19	12	8	-	6.94	17
R5173.100-018-08-05	m 1	18	18	20	8	5	-	5.06	15
R5173.100-018-08-06	m 1	18	18	20	8	6	-	5.06	15
R5173.100-018-12-08	m 1	18	18	20	12	8	-	7.58	20
R5173.100-019-08-06	m 1	19	19	21	8	6	-	6.38	16
R5173.100-019-12-08	m 1	19	19	21	12	8	-	9.57	22
R5173.100-020-08-06	m 1	20	20	22	8	6	-	5.94	18
R5173.100-020-08-08	m 1	20	20	22	8	8	-	5.94	15
R5173.100-020-12-08	m 1	20	20	22	12	8	-	8.90	25
R5173.100-020-12-10	m 1	20	20	22	12	10	3×1,4	8.90	20
R5173.100-021-08-06	m 1	21	21	23	8	6	-	6.38	20
R5173.100-021-12-10	m 1	21	21	23	12	10	-	9.57	23
R5173.100-022-08-06	m 1	22	22	24	8	6	-	6.83	23
R5173.100-022-12-10	m 1	22	22	24	12	10	-	10.24	29
R5173.100-023-08-06	m 1	23	23	25	8	6	-	7.28	25
R5173.100-023-12-10	m 1	23	23	25	12	10	-	10.93	32
R5173.100-024-08-06	m 1	24	24	26	8	6	-	7.74	27
R5173.100-024-08-08	m 1	24	24	26	8	8	-	9.67	26
R5173.100-024-12-08	m 1	24	24	26	12	8	-	11.61	38
R5173.100-024-12-10	m 1	24	24	26	12	10	3×1,4	11.61	35
R5173.100-025-08-06	m 1	25	25	27	8	6	-	8.20	30
R5173.100-025-08-08	m 1	25	25	27	8	8	-	10.29	28
R5173.100-025-08-10	m 1	25	25	27	8	10	3×1,4	10.29	26
R5173.100-025-12-08	m 1	25	25	27	12	8	-	12.30	42
R5173.100-025-12-10	m 1	25	25	27	12	10	3×1,4	12.30	39
R5173.100-026-08-06	m 1	26	26	28	8	6	-	8.66	32
R5173.100-026-12-08	m 1	26	26	28	12	8	-	12.99	46
R5173.100-027-08-06	m 1	27	27	29	8	6	-	9.13	35
R5173.100-027-12-08	m 1	27	27	29	12	8	-	13.69	50
R5173.100-028-08-06	m 1	28	28	30	8	6	-	9.60	37
R5173.100-028-08-08	m 1	28	28	30	8	8	-	9.60	36
R5173.100-028-12-08	m 1	28	28	30	12	8	-	14.40	56
R5173.100-028-12-10	m 1	28	28	30	12	10	3×1,4	14.40	51
R5173.100-028-12-12	m 1	28	28	30	12	12	4×1,8	14.40	47

STANDARD SPUR GEARS



R5175



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,04 - 0,10mm.

Tips

Module 1 for gears with 14-120 teeth see R5173 & R5179, for gears with 8-10 see R5176, for gears with 12-18 see R5177.
Max. allowable torque (Nm) is based on

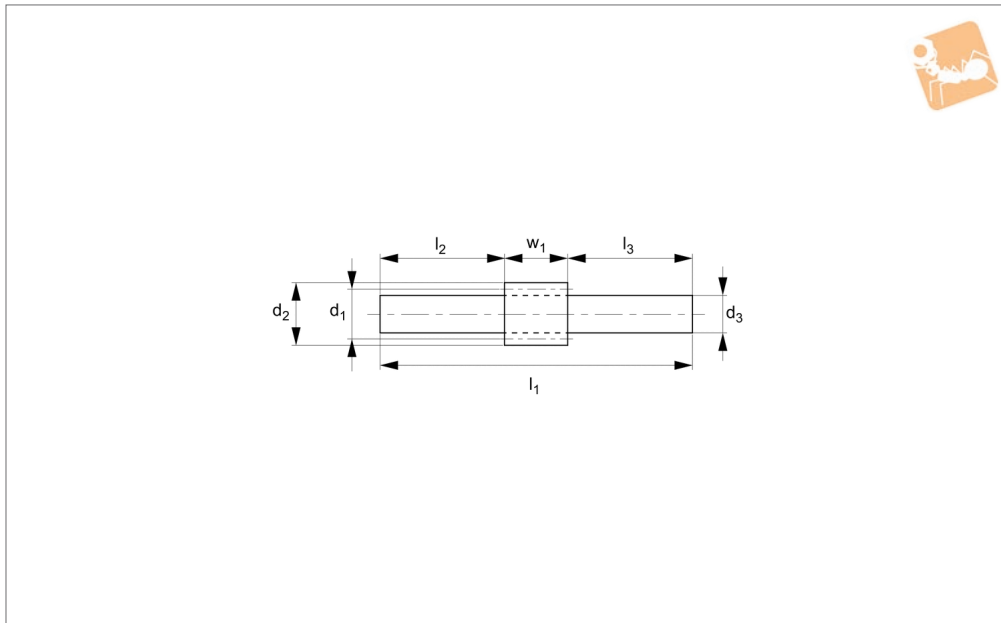
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	l ₁	l ₂	l ₃	Torque Nm max.	Weight g
R5175.100-08	m 1	8	Shifted gear *	10.64	12	10.6	60	16	32	3.07	39.5
R5175.100-10	m 1	10	Shifted gear *	12.66	12	12.66	60	16	32	4.23	56.4



Spur Gears - Module 1

carbon steel - 8-10 teeth



R5176

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

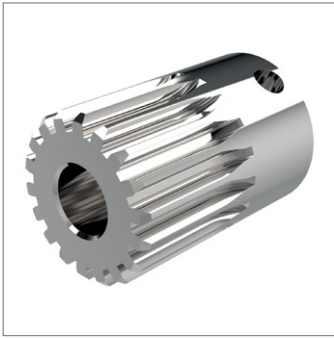
gears = 0,04 - 0,10mm.

Tips

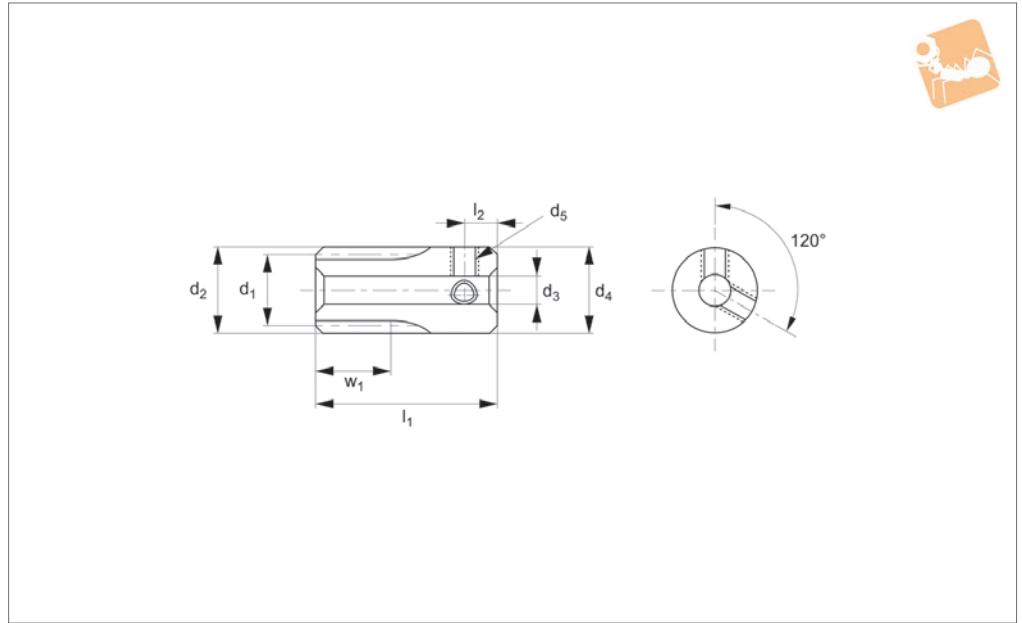
Module 1 for gears with 14-120 teeth see R5173 & R5179, for gears with 8-10 teeth see R175, for gears with 12-18 teeth see R5177.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	l_1	l_2	l_3	Torque Nm max.	Weight g
R5176.100-008	m 1	8	Shifted Gear *	10.6	12	6	60	16	32	3.38	16.7
R5176.100-010	m 1	10	Shifted Gear *	12.7	12	6	60	16	32	5.07	27.9



R5177



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,04 - 0,10mm.

Tips

Module 1 for gears with 14-120 teeth see R5173 & R5179, for gears with 8-10 teeth see R5175 & R5176.

Max. allowable torque (Nm) is based on

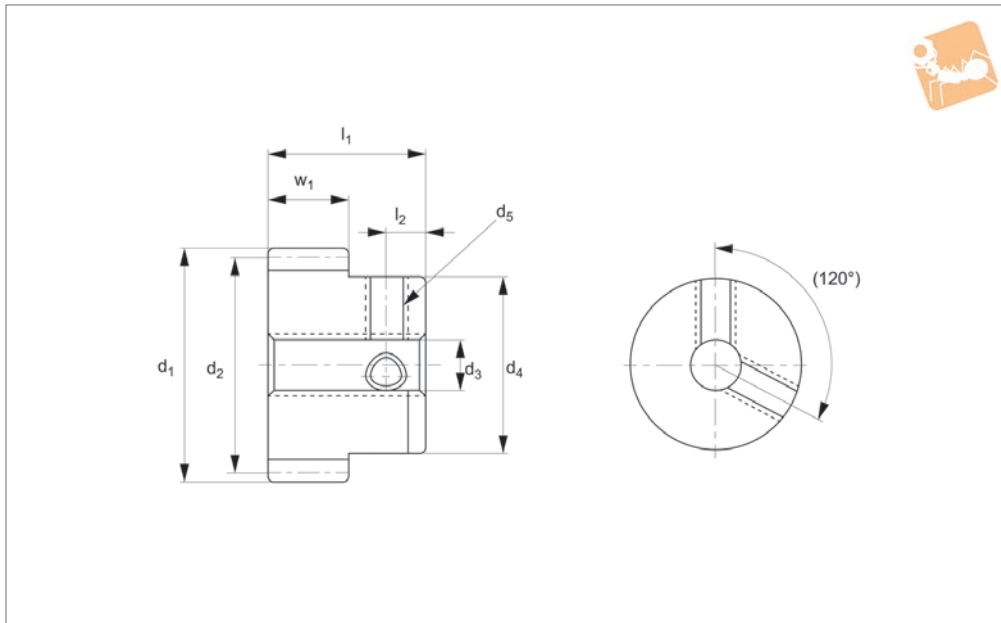
standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5177.100-012-12	m 1	12	12	14	12	6	14	30	5	2xM 4	3.89	25.1
R5177.100-013-12	m 1	13	13	15	12	6	15	30	5	2xM 4	4.47	30.1
R5177.100-014-08	m 1	14	14	16	8	6	16	25	4	2xM 4	3.38	30.1
R5177.100-014-12	m 1	14	14	16	12	6	16	30	5	2xM 5	5.07	35.0
R5177.100-015-08	m 1	15	15	17	8	6	17	25	4	2xM 4	3.79	35.0
R5177.100-015-12	m 1	15	15	17	12	6	17	30	5	2xM 5	5.10	40.7
R5177.100-016-06	m 1	16	16	18	8	6	18	25	4	2xM 4	4.21	40.0
R5177.100-016-08	m 1	16	16	18	8	8	18	25	4	2xM 4	4.21	35.9
R5177.100-016-12	m 1	16	16	18	12	8	18	30	5	2xM 5	6.31	41.8
R5177.100-017-08	m 1	17	17	19	8	8	19	25	4	2xM 4	4.63	41.3
R5177.100-017-12	m 1	17	17	19	12	8	19	30	5	2xM 5	6.94	48.2
R5177.100-018-08	m 1	18	18	20	8	8	20	25	4	2xM 4	5.06	47.1
R5177.100-018-12	m 1	18	18	20	12	8	20	30	4	2xM 4	7.58	55.6



Spur Gears - Module 1

carbon steel - 14-120 teeth



R5179

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45). Accuracy to JIS B 1702-1 (ISO) class 8, induction hardened class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears=0,04- 0,10 mm.

Tips

Module 1 for gears with 8-10 teeth see R5175 & R5176, for gears with 12-18 teeth see R5177, for gears with 14-120 teeth without screw see R5179. Max. allowable torque (Nm) is based on standard opera-

ting conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Hub dia. d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5179.100-014-08-05	m 1	14	14	16	8	5 tol. H8	11	16	-	-	3.38	13
R5179.100-014-10-05	m 1	14	14	16	10	5 tol. H8	11	20	-	-	3.80	17
R5179.100-015-08-05	m 1	15	15	17	8	5 tol. H8	12	16	-	-	3.79	16
R5179.100-015-10-05	m 1	15	15	17	10	5 tol. H8	12	20	-	-	4.30	20
R5179.100-016-08-05	m 1	16	16	18	8	5 tol. H8	13	16	-	-	4.21	19
R5179.100-016-10-05	m 1	16	16	18	10	5 tol. H8	13	20	-	-	4.80	22
R5179.100-017-08-05	m 1	17	17	19	8	5 tol. H8	14	16	-	-	4.63	22
R5179.100-017-10-05	m 1	17	17	19	10	5 tol. H8	14	20	-	-	5.23	27
R5179.100-018-08-06	m 1	18	18	20	8	6	14	16	4	2xM 4	5.06	22
R5179.100-018-10-06	m 1	18	18	20	10	6 tol. H8	15	20	-	-	6.32	30
R5179.100-018-10-08	m 1	18	18	20	10	8	15	20	5	2xM 5	6.62	26
R5179.100-019-08-06	m 1	19	19	21	8	6	16	16	-	-	6.38	26
R5179.100-019-12-08	m 1	19	19	21	12	8	16	20	-	-	9.57	31
R5179.100-020-08-06	m 1	20	20	22	8	6	16	16	-	-	5.94	29
R5179.100-020-08-06T	m 1	20	20	22	8	6	16	16	4	2xM 4	5.94	28
R5179.100-020-08-08	m 1	20	20	22	8	8	16	16	4	2xM 4	5.94	26
R5179.100-020-10-05	m 1	20	20	22	10	5 tol. H8	16	20	-	-	7.47	37
R5179.100-020-10-06	m 1	20	20	22	10	6 tol. H8	16	20	-	-	7.47	37
R5179.100-020-10-08	m 1	20	20	22	10	8	16	20	5	2xM 5	7.47	32
R5179.100-020-12-06	m 1	20	20	22	12	6 tol. H8	16	20	-	-	8.90	38
R5179.100-020-12-06T	m 1	20	20	22	12	6 tol. H8	16	20	4	2xM 4	8.90	37
R5179.100-020-12-08	m 1	20	20	22	12	8	16	20	4	2xM 4	8.90	34
R5179.100-021-08-06	m 1	21	21	23	8	6	18	16	-	-	6.38	34
R5179.100-021-12-08	m 1	21	21	23	12	8	18	20	-	-	9.57	49
R5179.100-022-08-06	m 1	22	22	24	8	6	18	16	-	-	6.83	37
R5179.100-022-12-08	m 1	22	22	24	12	8	18	20	-	-	10.24	44
R5179.100-023-08-06	m 1	23	23	25	8	6	20	16	-	-	7.28	43
R5179.100-023-12-08	m 1	23	23	25	12	8	20	20	-	-	10.93	51
R5179.100-024-08-06	m 1	24	24	26	8	6	16	16	-	-	7.74	38



Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Hub dia. d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5179.100-024-08-06T	m 1	24	24	26	8	6	16	16	4	2xM 4	7.74	37
R5179.100-024-08-08	m 1	24	24	26	8	8	16	16	4	2xM 4	7.74	35
R5179.100-024-10-06	m 1	24	24	26	10	6 tol. H8	20	20	-	-	9.67	56
R5179.100-024-10-08	m 1	24	24	26	10	8	20	20	5	2xM 5	9.67	51
R5179.100-024-12-08	m 1	24	24	26	12	8	20	20	-	-	11.61	55
R5179.100-024-12-08T	m 1	24	24	26	12	8	20	20	4	2xM 4	11.61	54
R5179.100-024-12-10	m 1	24	24	26	12	10	20	20	4	2xM 4	11.61	49
R5179.100-025-08-06	m 1	25	25	27	8	6	16	16	-	-	8.20	40
R5179.100-025-08-06T	m 1	25	25	27	8	6	16	16	4	2xM 4	8.20	40
R5179.100-025-08-08	m 1	25	25	27	8	8	16	16	4	2xM 4	8.20	37
R5179.100-025-10-05	m 1	25	25	27	10	5 tol. H8	20	20	-	-	10.90	60
R5179.100-025-10-06	m 1	25	25	27	10	6 tol. H8	20	20	-	-	10.90	59
R5179.100-025-10-08	m 1	25	25	27	10	8	20	20	5	2xM 5	10.90	54
R5179.100-025-12-08	m 1	25	25	27	12	8	20	20	-	-	12.30	59
R5179.100-025-12-08T	m 1	25	25	27	12	8	20	20	4	2xM 4	12.30	58
R5179.100-025-12-10	m 1	25	25	27	12	10	20	20	4	2xM 4	12.30	53
R5179.100-026-08-06	m 1	26	26	28	8	6	22	16	-	-	8.66	54
R5179.100-026-12-08	m 1	26	26	28	12	8	22	20	-	-	12.99	66
R5179.100-027-08-06	m 1	27	27	29	8	6	24	16	-	-	9.13	61
R5179.100-027-12-08	m 1	27	27	29	12	8	24	20	-	-	13.69	75
R5179.100-028-08-06	m 1	28	28	30	8	6	20	16	-	-	9.60	55
R5179.100-028-08-06T	m 1	28	28	30	8	6	20	16	4	2xM 4	9.60	54
R5179.100-028-08-08	m 1	28	28	30	8	8	20	16	4	2xM 4	9.60	52
R5179.100-028-08-10	m 1	28	28	30	8	10	20	16	4	2xM 4	9.60	52
R5179.100-028-10-08	m 1	28	28	30	10	8	24	20	-	-	12.90	77
R5179.100-028-10-10	m 1	28	28	30	10	10	24	20	5	2xM 5	12.90	70
R5179.100-028-12-10	m 1	28	28	30	12	10	24	20	-	-	14.40	75
R5179.100-028-12-10T	m 1	28	28	30	12	10	24	20	4	2xM 4	14.40	73
R5179.100-028-12-12	m 1	28	28	30	12	12	24	20	4	2xM 4	14.40	68
R5179.100-030-08-06	m1	30	30	32	8	6	24	16	-	-	10.54	70
R5179.100-030-08-06T	m1	30	30	32	8	6	24	16	4	2xM 4	10.54	68
R5179.100-030-08-08	m1	30	30	32	8	8	24	16	4	2xM 4	10.54	66
R5179.100-030-08-10	m1	30	30	32	8	10	24	16	4	2xM 4	10.54	62
R5179.100-030-08-12	m1	30	30	32	8	12	24	16	4	2xM 4	10.54	58
R5179.100-030-10-06	m1	30	30	32	10	6 tol. H8	25	20	-	-	13.19	90
R5179.100-030-10-08	m1	30	30	32	10	8	25	20	-	-	13.19	87
R5179.100-030-10-10	m1	30	30	32	10	10	25	20	5	2xM 5	13.19	80
R5179.100-030-12-10	m1	30	30	32	12	10	24	20	-	-	15.81	83
R5179.100-030-12-10T	m1	30	30	32	12	10	24	20	4	2xM 4	15.81	81
R5179.100-030-12-12	m1	30	30	32	12	12	24	20	4	2xM 4	15.81	76
R5179.100-032-06-06	m1	32	32	34	6	6	24	16	-	-	8.62	70
R5179.100-032-06-06T	m1	32	32	34	6	6	24	16	4	2xM 4	8.62	69
R5179.100-032-06-08	m1	32	32	34	6	8	24	16	4	2xM 4	8.62	66
R5179.100-032-06-10	m1	32	32	34	6	10	24	16	5	2xM 5	8.62	62
R5179.100-032-06-12	m1	32	32	34	6	12	24	16	5	2xM 5	8.62	58
R5179.100-032-10-10	m1	32	32	34	10	10	24	20	-	-	14.37	87
R5179.100-032-10-10T	m1	32	32	34	10	10	24	20	5	2xM 5	14.37	85
R5179.100-032-10-12	m1	32	32	34	10	12	24	20	5	2xM 5	14.37	80
R5179.100-034-06-06	m1	34	34	36	6	6	28	16	-	-	9.34	88
R5179.100-034-10-10	m1	34	34	36	10	10	28	20	-	-	15.57	108
R5179.100-035-06-06	m1	35	35	37	6	6	24	16	-	-	9.70	78
R5179.100-035-06-06T	m1	35	35	37	6	6	24	16	4	2xM 4	9.70	76
R5179.100-035-06-08	m1	35	35	37	6	8	24	16	4	2xM 4	9.70	74
R5179.100-035-06-10	m1	35	35	37	6	10	24	16	5	2xM 5	9.70	70
R5179.100-035-06-12	m1	35	35	37	6	12	24	16	5	2xM 5	9.70	66
R5179.100-035-10-10	m1	35	35	37	10	10	30	20	-	-	16.17	119
R5179.100-035-10-10T	m1	35	35	37	10	10	30	20	5	2xM 5	16.17	117
R5179.100-035-10-12	m1	35	35	37	10	12	30	20	5	2xM 5	16.17	111
R5179.100-035-10-15	m1	35	35	37	10	15	30	20	5	2xM 5	16.17	102
R5179.100-036-06-08	m1	36	36	38	6	8	24	16	-	-	10.07	78
R5179.100-036-06-08T	m1	36	36	38	6	8	24	16	4	2xM 4	10.07	76
R5179.100-036-06-10	m1	36	36	38	6	10	24	16	5	2xM 5	10.07	72
R5179.100-036-06-12	m1	36	36	38	6	12	24	16	5	2xM 5	10.07	68
R5179.100-036-10-10	m1	36	36	38	10	10	30	20	-	-	16.78	124
R5179.100-036-10-10T	m1	36	36	38	10	10	30	20	5	2xM 5	16.78	121
R5179.100-036-10-12	m1	36	36	38	10	12	30	20	5	2xM 5	16.78	116
R5179.100-036-10-15	m1	36	36	38	10	15	30	20	5	2xM 5	16.78	106

Spur Gears - Module 1

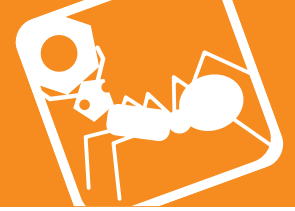
carbon steel - 14-120 teeth

Standard Spur Gears



Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Hub dia. d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5179.100-038-06-08	m1	38	38	40	6	8	25	16	-	-	10.80	86
R5179.100-038-10-10	m1	38	38	40	10	10	30	20	-	-	18.00	133
R5179.100-040-06-08	m1	40	40	42	6	8	24	16	-	-	11.53	89
R5179.100-040-06-08T	m1	40	40	42	6	8	24	16	4	2xM 4	11.53	88
R5179.100-040-06-10	m1	40	40	42	6	10	24	16	5	2xM 5	11.53	84
R5179.100-040-06-12	m1	40	40	42	6	12	24	16	5	2xM 5	11.53	79
R5179.100-040-10-06	m1	40	40	42	10	6 tol. H8	30	20	-	-	19.18	150
R5179.100-040-10-10	m1	40	40	42	10	10	30	20	-	-	19.18	142
R5179.100-040-10-10T	m1	40	40	42	10	10	30	20	5	2xM 5	19.18	140
R5179.100-040-10-12	m1	40	40	42	10	12	30	20	5	2xM 5	19.18	135
R5179.100-040-10-15	m1	40	40	42	10	15	30	20	5	2xM 5	19.18	125
R5179.100-042-06-08	m1	42	42	44	6	8	28	16	-	-	12.27	108
R5179.100-042-10-10	m1	42	42	44	10	10	30	20	-	-	20.45	152
R5179.100-044-06-08	m1	44	44	46	6	8	28	16	-	-	13.01	114
R5179.100-044-10-10	m1	44	44	46	10	10	30	20	-	-	21.68	163
R5179.100-045-06-08	m1	45	45	47	6	8	24	16	-	-	13.38	105
R5179.100-045-06-08T	m1	45	45	47	6	8	24	16	4	2xM 4	13.38	103
R5179.100-045-06-10	m1	45	45	47	6	10	24	16	5	2xM 5	13.38	99
R5179.100-045-06-12	m1	45	45	47	6	12	24	16	5	2xM 5	13.38	95
R5179.100-045-10-10	m1	45	45	47	10	10	30	20	-	-	22.30	168
R5179.100-045-10-10T	m1	45	45	47	10	10	30	20	5	2xM 5	22.30	166
R5179.100-045-10-12	m1	45	45	47	10	12	30	20	5	2xM 5	22.30	161
R5179.100-045-10-15	m1	45	45	47	10	15	30	20	5	2xM 5	22.30	151
R5179.100-046-06-08	m1	46	46	48	6	8	30	16	-	-	13.75	128
R5179.100-046-10-10	m1	46	46	48	10	10	30	20	-	-	22.92	174
R5179.100-048-06-08	m1	48	48	50	6	8	24	16	-	-	15.18	115
R5179.100-048-06-08T	m1	48	48	50	6	8	24	16	4	2xM 4	15.18	114
R5179.100-048-06-10	m1	48	48	50	6	10	24	16	5	2xM 5	15.18	110
R5179.100-048-06-12	m1	48	48	50	6	12	24	16	5	2xM 5	15.18	105
R5179.100-048-10-10	m1	48	48	50	10	10	30	20	-	-	23.87	186
R5179.100-048-10-10T	m1	48	48	50	10	10	30	20	5	2xM 5	23.87	183
R5179.100-048-10-12	m1	48	48	50	10	12	30	20	5	2xM 5	23.87	178
R5179.100-048-10-15	m1	48	48	50	10	15	30	20	5	2xM 5	23.87	168
R5179.100-050-06-08	m1	50	50	52	6	8	24	16	-	-	14.32	122
R5179.100-050-06-08T	m1	50	50	52	6	8	24	16	4	2xM 4	14.32	121
R5179.100-050-06-10	m1	50	50	52	6	10	24	16	5	2xM 5	14.32	117
R5179.100-050-06-12	m1	50	50	52	6	12	24	16	5	2xM 5	14.32	113
R5179.100-050-10-08	m1	50	50	52	10	8	35	20	-	-	24.83	221
R5179.100-050-10-10	m1	50	50	52	10	10	30	20	-	-	24.83	198
R5179.100-050-10-10T	m1	50	50	52	10	10	30	20	5	2xM 5	24.83	195
R5179.100-050-10-12	m1	50	50	52	10	12	30	20	5	2xM 5	24.83	190
R5179.100-050-10-15	m1	50	50	52	10	15	30	20	5	2xM 5	24.83	180
R5179.100-052-06-10	m1	52	52	54	6	10	40	16	-	-	15.28	189
R5179.100-052-10-10	m1	52	52	54	10	10	46	20	-	-	25.78	285
R5179.100-054-06-10	m1	54	54	56	6	10	40	16	-	-	16.23	197
R5179.100-054-10-10	m1	54	54	56	10	10	46	20	-	-	27.69	298
R5179.100-055-06-10	m1	55	55	57	6	10	40	16	-	-	16.23	201
R5179.100-055-10-10	m1	55	55	57	10	10	46	20	-	-	27.69	305
R5179.100-056-06-10	m1	56	56	58	6	10	24	16	-	-	17.19	142
R5179.100-056-06-10T	m1	56	56	58	6	10	24	16	5	2xM 5	17.19	140
R5179.100-056-06-12	m1	56	56	58	6	12	24	16	5	2xM 5	17.19	136
R5179.100-056-10-10	m1	56	56	58	10	10	30	20	-	-	28.65	237
R5179.100-056-10-10T	m1	56	56	58	10	10	30	20	5	2xM 5	28.65	234
R5179.100-056-10-12	m1	56	56	58	10	12	30	20	5	2xM 5	28.65	229
R5179.100-056-10-15	m1	56	56	58	10	15	30	20	5	2xM 5	28.65	220
R5179.100-058-06-10	m1	58	58	60	6	10	40	16	-	-	18.14	214
R5179.100-058-10-10	m1	58	58	60	10	10	50	20	-	-	29.60	362
R5179.100-060-06-10	m1	60	60	62	6	10	30	16	-	-	18.14	179
R5179.100-060-06-10T	m1	60	60	62	6	10	30	16	5	2xM 5	18.14	177
R5179.100-060-06-12	m1	60	60	62	6	12	30	16	5	2xM 5	18.14	173
R5179.100-060-06-15	m1	60	60	62	6	15	30	16	5	2xM 5	18.14	165
R5179.100-060-10-08	m1	60	60	62	10	8	42	20	-	-	31.51	322
R5179.100-060-10-10	m1	60	60	62	10	10	30	20	-	-	31.51	266
R5179.100-060-10-10T	m1	60	60	62	10	10	30	20	5	2xM 5	31.51	263
R5179.100-060-10-12	m1	60	60	62	10	12	30	20	5	2xM 5	31.51	258
R5179.100-060-10-15	m1	60	60	62	10	15	30	20	5	2xM 5	31.51	248
R5179.100-062-06-10	m1	62	62	64	6	10	40	16	-	-	19.10	231

STANDARD SPUR GEARS



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Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Hub dia. d ₄	l ₁	l ₂	Thread d ₅	Torque Nm max.	Weight g
R5179.100-062-10-10	m 1	62	62	64	10	10	50	20	-	-	32.47	379
R5179.100-064-06-10	m 1	64	64	66	6	10	30	16	-	-	20.05	178
R5179.100-064-06-10T	m 1	64	64	66	6	10	30	16	5	2xM 5	20.05	176
R5179.100-064-06-12	m 1	64	64	66	6	12	30	16	5	2xM 5	20.05	172
R5179.100-064-10-10	m 1	64	64	66	10	10	30	20	-	-	33.42	296
R5179.100-064-10-10T	m 1	64	64	66	10	10	30	20	5	2xM 5	33.42	294
R5179.100-064-10-12	m 1	64	64	66	10	12	30	20	5	2xM 5	33.42	289
R5179.100-064-10-15	m 1	64	64	66	10	15	30	20	5	2xM 5	33.42	279
R5179.100-065-06-10	m 1	65	65	67	6	10	40	16	-	-	20.05	246
R5179.100-065-10-10	m 1	65	65	67	10	10	50	20	-	-	34.38	403
R5179.100-066-06-10	m 1	66	66	68	6	10	40	16	-	-	21.01	250
R5179.100-066-10-10	m 1	66	66	68	10	10	50	20	-	-	35.33	411
R5179.100-068-06-10	m 1	68	68	70	6	10	40	16	-	-	21.96	260
R5179.100-068-10-10	m 1	68	68	70	10	10	50	20	-	-	36.29	427
R5179.100-070-06-10	m 1	70	70	72	6	10	40	16	-	-	21.96	270
R5179.100-070-10-10	m 1	70	70	72	10	10	50	20	-	-	38.20	443
R5179.100-070-10-10D	m 1	70	70	72	10	10	55	20	-	-	38.20	443
R5179.100-072-06-10	m 1	72	72	74	6	10	30	16	-	-	22.92	218
R5179.100-072-06-10T	m 1	72	72	74	6	10	30	16	5	2xM 5	22.92	216
R5179.100-072-06-12T	m 1	72	72	74	6	12	30	16	5	2xM 5	22.92	212
R5179.100-072-10-10	m 1	72	72	74	10	10	30	20	-	-	39.15	363
R5179.100-072-10-10T	m 1	72	72	74	10	10	30	20	5	2xM 5	39.15	361
R5179.100-072-10-12T	m 1	72	72	74	10	12	30	20	5	2xM 5	39.15	356
R5179.100-072-10-15T	m 1	72	72	74	10	15	30	20	5	2xM 5	39.15	346
R5179.100-075-06-10	m 1	75	75	77	6	10	40	16	-	-	23.87	297
R5179.100-075-10-10	m 1	75	75	77	10	10	50	20	-	-	41.06	489
R5179.100-080-06-10	m 1	80	80	82	6	10	30	16	-	-	25.78	283
R5179.100-080-06-10T	m 1	80	80	82	6	10	30	16	5	2xM 5	25.78	280
R5179.100-080-06-12T	m 1	80	80	82	6	12	30	16	5	2xM 5	25.78	276
R5179.100-080-06-15T	m 1	80	80	82	6	15	30	16	5	2xM 5	25.78	269
R5179.100-080-10-10D	m 1	80	80	82	10	10	60	20	-	-	43.93	604
R5179.100-080-10-10	m 1	80	80	82	10	10	32	20	-	-	17.19	446
R5179.100-080-10-10T	m 1	80	80	82	10	10	32	20	5	2xM 5	17.19	443
R5179.100-080-10-12T	m 1	80	80	82	10	12	32	20	5	2xM 5	17.19	438
R5179.100-080-10-15T	m 1	80	80	82	10	15	32	20	5	2xM 5	17.19	428
R5179.100-080-10-16T	m 1	80	80	82	10	16	32	20	5	2xM 5	17.19	425
R5179.100-084-06-10	m 1	84	84	86	6	10	50	16	-	-	27.69	406
R5179.100-084-10-10	m 1	84	84	86	10	10	50	20	-	-	46.79	577
R5179.100-085-06-10	m 1	85	85	87	6	10	50	16	-	-	27.69	412
R5179.100-085-10-10	m 1	85	85	87	10	10	50	20	-	-	46.79	588
R5179.100-090-06-10	m 1	90	90	92	6	10	50	16	-	-	29.60	444
R5179.100-090-10-10	m 1	90	90	92	10	10	50	20	-	-	50.61	642
R5179.100-090-10-10D	m 1	90	90	92	10	10	65	20	-	-	50.61	747
R5179.100-096-06-10	m 1	96	96	98	6	10	50	16	-	-	32.47	486
R5179.100-096-10-10	m 1	96	96	98	10	10	50	20	-	-	54.43	710
R5179.100-100-06-10	m 1	100	100	102	6	10	30	16	-	-	34.38	416
R5179.100-100-06-10T	m 1	100	100	102	6	10	30	16	5	2xM 5	34.38	414
R5179.100-100-06-12T	m 1	100	100	102	6	12	30	16	5	2xM 5	34.38	410
R5179.100-100-06-15T	m 1	100	100	102	6	15	30	16	5	2xM 5	34.38	402
R5179.100-100-10-10D	m 1	100	100	102	10	10	70	20	-	-	57.30	905
R5179.100-100-10-12	m 1	100	100	102	10	12	36	20	-	-	57.30	680
R5179.100-100-10-12T	m 1	100	100	102	10	12	36	20	5	2xM 5	57.30	676
R5179.100-100-10-15T	m 1	100	100	102	10	15	36	20	5	2xM 5	57.30	667
R5179.100-100-10-16T	m 1	100	100	102	10	16	36	20	5	2xM 5	57.30	663
R5179.100-105-06-10	m 1	105	105	107	6	10	50	16	-	-	36.29	553
R5179.100-105-10-12	m 1	105	105	107	10	12	50	20	-	-	60.16	817
R5179.100-110-06-10	m 1	110	110	112	6	10	50	16	-	-	38.20	592
R5179.100-110-10-12	m 1	110	110	112	10	12	50	20	-	-	63.03	883
R5179.100-115-06-10	m 1	115	115	117	6	10	50	16	-	-	40.11	634
R5179.100-115-10-12	m 1	115	115	117	10	12	50	20	-	-	66.85	952
R5179.100-120-06-10	m 1	120	120	122	6	10	30	16	-	-	42.02	579
R5179.100-120-06-10T	m 1	120	120	122	6	10	30	16	5	2xM 5	42.02	577
R5179.100-120-06-12T	m 1	120	120	122	6	12	30	16	5	2xM 5	42.02	572
R5179.100-120-06-15T	m 1	120	120	122	6	15	30	16	5	2xM 5	42.02	565
R5179.100-120-10-10D	m 1	120	120	122	10	10	90	20	-	-	69.71	1374
R5179.100-120-10-12	m 1	120	120	122	10	12	36	20	-	-	69.71	951
R5179.100-120-10-12T	m 1	120	120	122	10	12	36	20	5	2xM 5	69.71	948



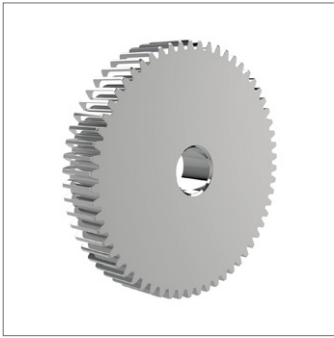
Spur Gears - Module 1

carbon steel - 14-120 teeth

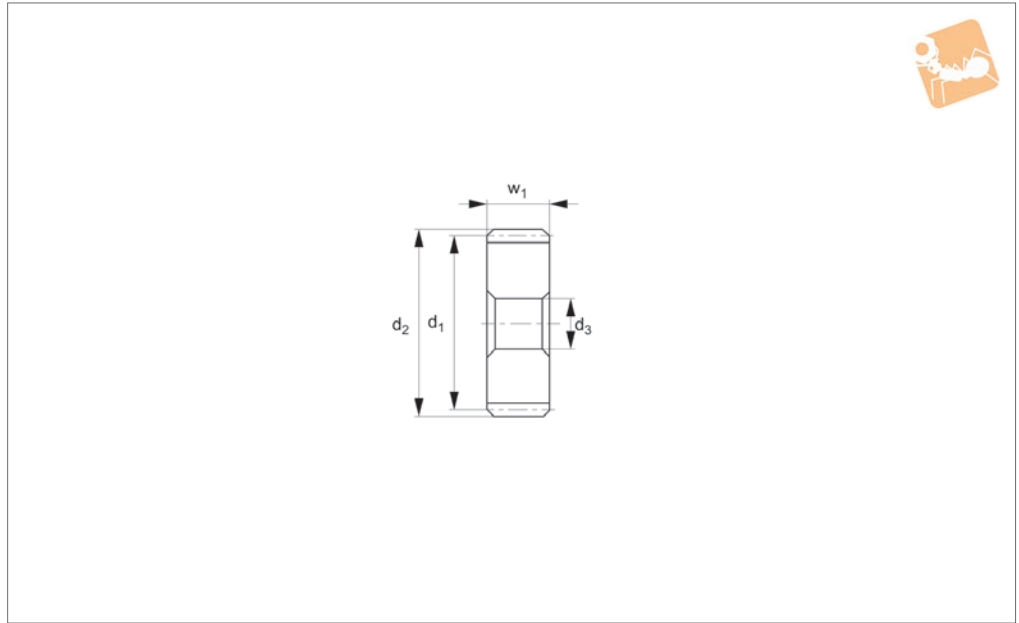


Standard Spur Gears

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	Hub dia. d_4	l_1	l_2	Thread d_5	Torque Nm max.	Weight g
R5179.100-120-10-15T	m 1	120	120	122	10	15	36	20	5	2xM 5	69.71	938
R5179.100-120-10-16T	m 1	120	120	122	10	16	36	20	5	2xM 5	69.71	935
R5179.100-120-10-18T	m 1	120	120	122	10	18	36	20	5	2xM 5	69.71	926



R5180



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8- 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,05 - 0,125mm.

Tips

Module 1.25 for gears with 8-11 teeth see R5181, for gears with 8-10 teeth see R5180, for gears with 12-17 teeth see R5183, for gears with 18-120 teeth see R5185.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	Torque Nm max.	Weight g
R5180.125-014-15	m 1.25	14	17.5	20.0	15	6	9.91	25.0
R5180.125-015-15	m 1.25	15	18.8	21.3	15	6	11.10	29.2
R5180.125-016-15	m 1.25	16	20.0	22.5	15	6	12.32	33.7
R5180.125-017-15	m 1.25	17	21.3	23.8	15	6	13.56	38.4
R5180.125-018-10	m 1.25	18	22.5	25.0	10	6	9.87	29.0
R5180.125-018-15	m 1.25	18	22.5	25.0	15	8	14.81	40.9
R5180.125-019-10	m 1.25	19	23.8	26.3	10	6	10.73	32.6
R5180.125-019-15	m 1.25	19	23.8	26.3	15	8	16.10	46.3
R5180.125-020-10	m 1.25	20	25.0	27.5	10	8	11.59	34.6
R5180.125-020-15	m 1.25	20	25	27.5	15	10	17.39	48.6
R5180.125-021-10	m 1.25	21	26.3	28.8	10	8	12.46	38.5
R5180.125-021-15	m 1.25	21	26.3	28.8	15	10	18.69	54.5
R5180.125-022-10	m 1.25	22	27.5	30.0	10	8	13.34	42.7
R5180.125-022-15	m 1.25	22	27.5	30.0	15	10	20.01	60.7
R5180.125-023-10	m 1.25	23	28.8	31.3	10	8	14.23	47.0
R5180.125-023-15	m 1.25	23	28.8	31.3	15	10	21.34	67.2
R5180.125-024-10	m 1.25	24	30.0	32.5	10	8	15.11	51.5
R5180.125-024-15	m 1.25	24	30.0	32.5	15	10	22.67	74.0
R5180.125-025-10	m 1.25	25	31.3	33.8	10	8	16.01	56.3
R5180.125-025-15	m 1.25	25	31.3	33.8	15	10	24.02	81.1
R5180.125-026-10	m 1.25	26	32.5	35.0	10	8	16.92	61.2
R5180.125-026-15	m 1.25	26	32.5	35.0	15	10	25.38	88.4
R5180.125-027-10	m 1.25	27	33.8	36.3	10	8	17.83	66.3
R5180.125-027-15	m 1.25	27	33.8	36.3	15	10	26.75	96.1
R5180.125-028-10	m 1.25	28	35.0	37.5	10	8	18.14	71.6
R5180.125-028-15	m 1.25	28	35.0	37.5	15	10	27.69	104.0
R5180.125-029-10	m 1.25	29	36.3	38.8	10	8	19.10	77.1
R5180.125-029-15	m 1.25	29	36.3	38.8	15	10	28.65	112.3
R5180.125-030-10	m 1.25	30	37.5	40.0	10	8	20.05	82.8



Spur Gears - Module 1.25

carbon steel - 14-120 teeth



Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	Torque Nm max.	Weight g
R5180.125-030-15	m 1.25	30	37.5	40.0	15	10	30.56	120.8
R5180.125-032-08	m 1.25	32	40.0	42.5	8	10	17.19	74.0
R5180.125-032-13	m 1.25	32	40.0	42.5	13	12	28.65	116.7
R5180.125-034-08	m 1.25	34	42.5	45.0	8	10	19.10	84.2
R5180.125-034-13	m 1.25	34	42.5	45.0	13	12	31.51	133.2
R5180.125-035-08	m 1.25	35	43.8	46.3	8	10	20.05	89.5
R5180.125-035-13	m 1.25	35	43.8	46.3	13	12	32.47	141.9
R5180.125-036-08	m 1.25	36	45.0	47.5	8	10	20.05	95.0
R5180.125-036-13	m 1.25	36	45.0	47.5	13	12	33.42	150.8
R5180.125-038-08	m 1.25	38	47.5	50.0	8	10	21.96	106.4
R5180.125-038-13	m 1.25	38	47.5	50.0	13	12	36.29	169.3
R5180.125-040-08	m 1.25	40	50.0	52.5	8	10	23.87	118.4
R5180.125-040-13	m 1.25	40	50.0	52.5	13	12	38.20	188.8
R5180.125-042-08	m 1.25	42	52.5	55.0	8	10	24.83	131.0
R5180.125-042-13	m 1.25	42	52.5	55.0	13	12	41.06	209.4
R5180.125-044-08	m 1.25	44	55.0	57.5	8	10	26.74	144.3
R5180.125-044-13	m 1.25	44	55.0	57.5	13	12	43.93	230.9
R5180.125-045-08	m 1.25	45	56.3	58.8	8	10	27.69	151.1
R5180.125-045-13	m 1.25	45	56.3	58.8	13	12	44.88	242.1
R5180.125-046-08	m 1.25	46	57.5	60.0	8	10	27.69	158.1
R5180.125-046-13	m 1.25	46	57.5	60.0	13	12	45.84	253.5
R5180.125-048-08	m 1.25	48	60.0	62.5	8	10	29.60	172.6
R5180.125-048-13	m 1.25	48	60.0	62.5	13	12	48.70	277.0
R5180.125-050-08	m 1.25	50	62.5	65.0	8	12	29.60	185.6
R5180.125-050-13	m 1.25	50	62.5	65.0	13	14	48.70	297.4
R5180.125-052-08	m 1.25	52	65.0	67.5	8	12	32.47	201.3
R5180.125-052-13	m 1.25	52	65.0	67.5	13	14	53.48	322.9
R5180.125-054-08	m 1.25	54	67.5	70.0	8	12	34.38	217.6
R5180.125-054-13	m 1.25	54	67.5	70.0	13	14	56.34	349.5
R5180.125-055-08	m 1.25	55	68.8	71.3	8	12	35.33	226.0
R5180.125-055-13	m 1.25	55	68.8	71.3	13	14	57.30	363.1
R5180.125-056-08	m 1.25	56	70.0	72.5	8	12	36.29	234.6
R5180.125-056-13	m 1.25	56	70.0	72.5	13	14	59.21	377.0
R5180.125-058-08	m 1.25	58	72.5	75.0	8	12	37.24	252.2
R5180.125-058-13	m 1.25	58	72.5	75.0	13	14	61.12	405.6
R5180.125-060-08	m 1.25	60	75.0	77.5	8	12	39.15	270.3
R5180.125-060-13	m 1.25	60	75.0	77.5	13	14	63.98	435.1
R5180.125-062-08	m 1.25	62	77.5	80.0	8	12	41.06	289.1
R5180.125-062-13	m 1.25	62	77.5	80.0	13	14	66.85	465.7
R5180.125-064-08	m 1.25	64	80.0	82.5	8	12	42.02	308.6
R5180.125-064-13	m 1.25	64	80.0	82.5	13	14	68.76	497.2
R5180.125-065-08	m 1.25	65	81.3	83.8	8	12	42.97	318.5
R5180.125-065-13	m 1.25	65	81.3	83.8	13	14	70.67	513.4
R5180.125-066-08	m 1.25	66	82.5	85.0	8	12	43.93	328.6
R5180.125-066-13	m 1.25	66	82.5	85.0	13	14	71.62	529.8
R5180.125-068-08	m 1.25	68	85.0	87.5	8	12	45.84	349.3
R5180.125-068-13	m 1.25	68	85.0	87.5	13	14	74.49	563.4
R5180.125-070-08	m 1.25	70	87.5	90.0	8	14	46.79	368.0
R5180.125-070-13	m 1.25	70	87.5	90.0	13	16	76.40	593.1
R5180.125-072-08	m 1.25	72	90.0	92.5	8	14	48.70	389.8
R5180.125-072-13	m 1.25	72	90.0	92.5	13	16	80.22	628.7
R5180.125-075-08	m 1.25	75	93.8	96.3	8	14	51.57	423.8
R5180.125-075-13	m 1.25	75	93.8	96.3	13	16	84.04	683.9
R5180.125-080-08	m 1.25	80	100.0	102.5	8	14	55.39	483.6
R5180.125-080-13	m 1.25	80	100.0	102.5	13	16	90.72	781.0
R5180.125-084-08	m 1.25	84	105.0	107.5	8	14	58.25	530.0
R5180.125-084-13	m 1.25	84	105.0	107.5	13	16	95.50	860.0
R5180.125-085-08	m 1.25	85	106.3	108.8	8	14	59.21	550.0
R5180.125-085-13	m 1.25	85	106.3	108.8	13	16	96.45	880.0
R5180.125-090-08	m 1.25	90	112.5	115.0	8	16	63.03	610.0
R5180.125-090-13	m 1.25	90	112.5	115.0	13	18	103.14	990.0
R5180.125-095-08	m 1.25	95	118.8	121.3	8	16	66.85	680.0
R5180.125-095-13	m 1.25	95	118.8	121.3	13	18	109.82	1100.0
R5180.125-096-08	m 1.25	96	120.0	122.5	8	16	67.80	700.0
R5180.125-096-13	m 1.25	96	120.0	122.5	13	18	110.78	1130.0
R5180.125-100-08	m 1.25	100	125.0	127.5	8	16	71.62	760.0
R5180.125-100-13	m 1.25	100	125.0	127.5	13	18	116.51	1230.0

STANDARD SPUR GEARS

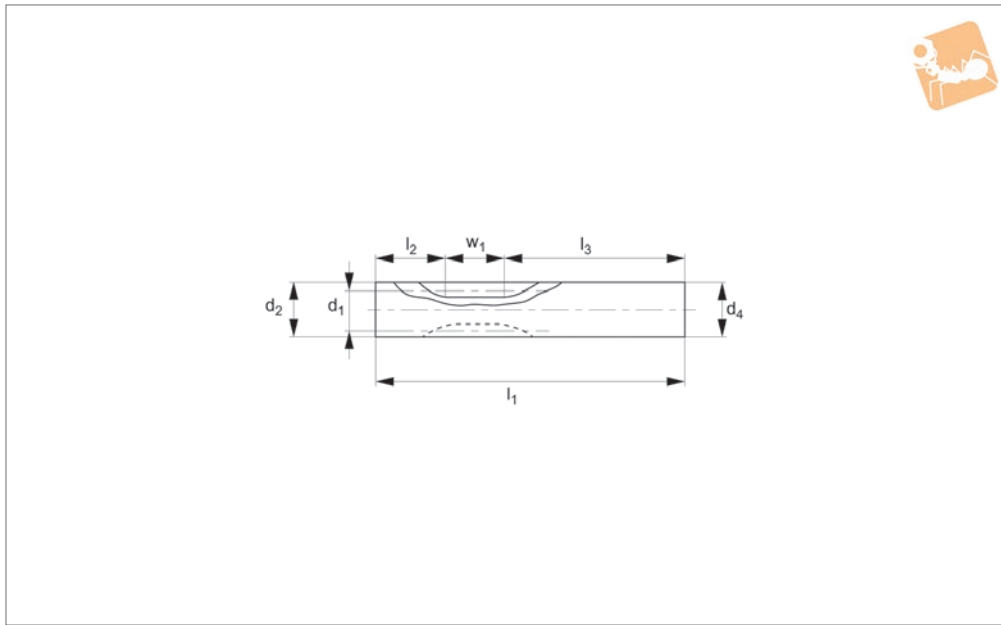


Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	Torque Nm max.	Weight g
R5180.125-105-08	<i>m</i> 1.25	105	131.3	133.8	8	16	75.44	840.0
R5180.125-105-13	<i>m</i> 1.25	105	131.3	133.8	13	18	123.19	1350.0
R5180.125-110-08	<i>m</i> 1.25	110	137.5	140.0	8	18	79.26	920.0
R5180.125-110-13	<i>m</i> 1.25	110	137.5	140.0	13	20	129.88	1480.0
R5180.125-115-08	<i>m</i> 1.25	115	143.8	146.3	8	18	84.04	1000.0
R5180.125-115-13	<i>m</i> 1.25	115	143.8	146.3	13	20	136.56	1620.0
R5180.125-120-08	<i>m</i> 1.25	120	150.0	152.5	8	18	87.86	1090.0
R5180.125-120-13	<i>m</i> 1.25	120	150.0	152.5	13	20	142.29	1770.0



Spur Gears - Module 1.25

carbon steel - 8-11 teeth



R5181

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,05 - 0,125mm. Rack shift coefficient x = 0.5.

cient x = 0.5.

Tips

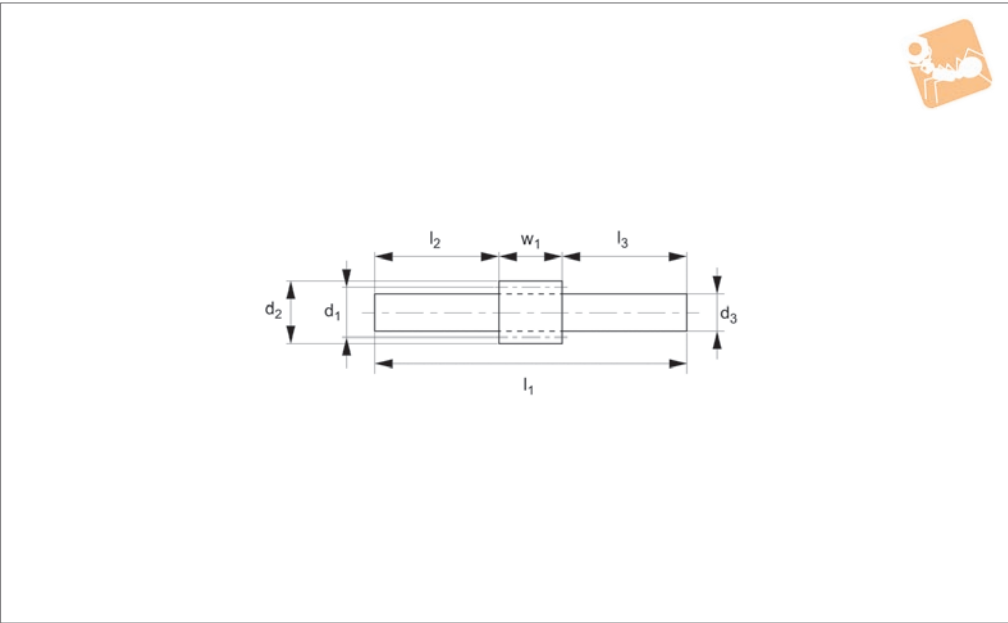
Module 1.25 for gears with 14-120 teeth see R5180, for gears with 8-10 teeth see R5182, for gears with 12-17 teeth see R5183, for gears with 18-120 teeth see R5185.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	l ₁	l ₂	l ₃	Torque Nm max.	Weight g
R5181.125-08	m 1.25	8	Shifted gear *	13.3	15	13.3	75	20	40	6.00	77.1
R5181.125-09	m 1.25	9	Shifted gear *	14.6	15	14.6	75	20	40	7.11	92.9
R5181.125-10	m 1.25	10	Shifted gear *	15.8	15	15.8	75	20	40	8.27	110.2
R5181.125-11	m 1.25	11	Shifted gear *	17.1	15	17.1	75	20	40	9.44	129.0



R5182



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,05 - 0,125mm. Rack shift coefficient $x = 0.5$.

cient $x = 0.5$.

Tips

Module 1.25 for gears with 14-120 teeth see R5180, for gears with 8-11 teeth see R5181, for gears with 12-17 teeth see R5183, for gears with 18-120 teeth see R185.

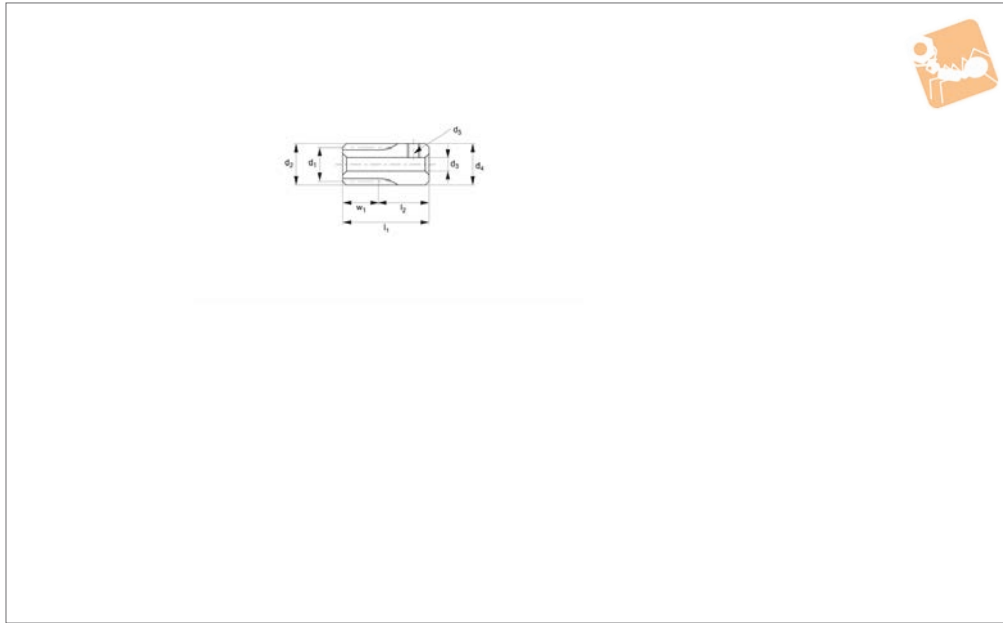
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H9	l_1	l_2	l_3	Torque Nm max.	Weight g
R5182.125-08	m 1.25	8	Shifted gear *	13.3	15	7	75	20	40	6.00	29.8
R5182.125-10	m 1.25	10	Shifted gear *	15.8	15	10	75	20	40	7.11	54.5



Spur Gears - Module 1.25

carbon steel - 12-17 teeth



R5183

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8.

Technical Notes

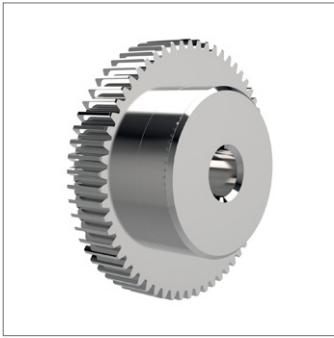
20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,05 - 0,125 mm.

Tips

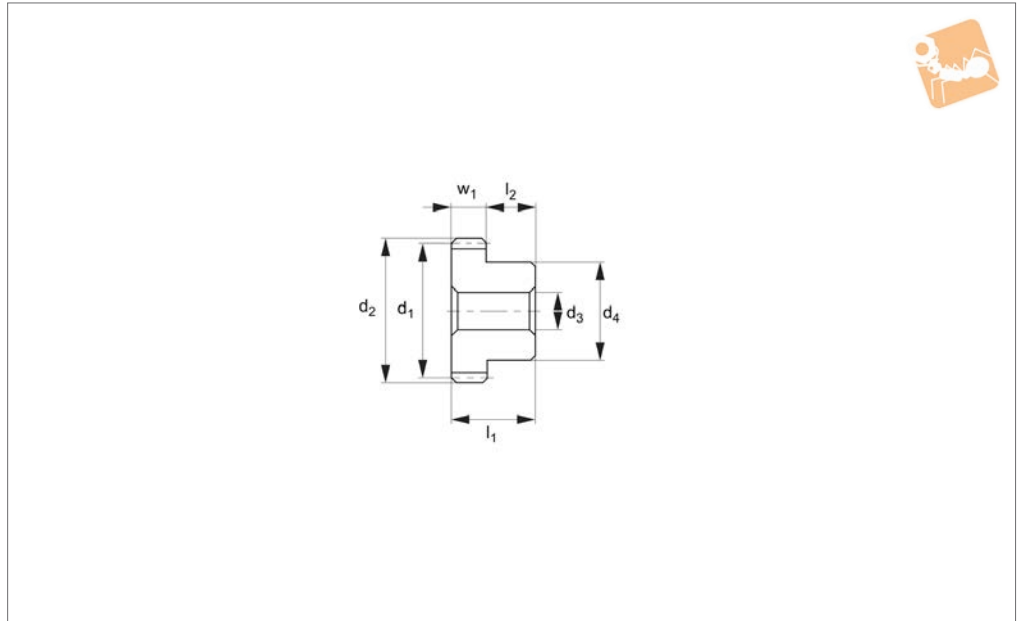
Module 1.25 for gears with 14-120 teeth see R5180, for gears with 8-11 teeth see R5181, for gears with 8-10 teeth see R5182, for gears with 18-120 teeth see R5185.
Max. allowable torque (Nm) is based on

standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5183.125-012	m 1.25	12	15.0	17.5	15	8	17.50	37.5	22.5	7.60	48.5
R5183.125-013	m 1.25	13	16.3	18.8	15	8	18.75	37.5	22.5	8.74	58.4
R5183.125-014	m 1.25	14	17.5	20.0	15	8	20.00	37.5	22.5	9.91	69.0
R5183.125-015	m 1.25	15	18.8	21.3	15	8	21.75	37.5	22.5	11.10	80.4
R5183.125-016	m 1.25	16	20.0	22.5	15	8	22.50	37.5	22.5	12.32	92.4
R5183.125-017	m 1.25	17	21.3	23.8	15	8	23.75	37.5	22.5	13.56	105.2



R5185



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,05 - 0,125mm.

Tips

Module 1.25 for gears with 14-120 teeth see R5180, for gears with 8-11 teeth see R5181, for gears with 8-10 teeth see R5182, for gears with 12-17 teeth see R5183.
To calculate the max. allowable torque that

the gear can produce (in Nm) take the figure (in Watts) from the transfer capability table below, and apply to formula:
Torque (in Nm) = 9550* [value in kW (from table below)/rpm]. Apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5185.125-018-10	m 1.25	18	22.5	25.0	10	6 tol. H8	16	25	15	9.87	48.5
R5185.125-018-15	m 1.25	18	22.5	25.0	15	8 tol. H8	16	30	15	14.81	58.7
R5185.125-019-10	m 1.25	19	23.8	26.3	10	6 tol. H8	16	25	15	10.73	52.9
R5185.125-019-15	m 1.25	19	23.8	26.3	15	8 tol. H8	16	30	15	16.10	64.0
R5185.125-020-10	m 1.25	20	25.0	27.5	10	8 tol. H8	20	25	15	11.59	65.7
R5185.125-020-15	m 1.25	20	25.0	27.5	15	10 tol. H8	20	30	15	17.39	76.3
R5185.125-021-10	m 1.25	21	26.3	28.8	10	8 tol. H8	20	25	15	12.46	69.6
R5185.125-021-15	m 1.25	21	26.3	28.8	15	10 tol. H8	20	30	15	18.69	82.2
R5185.125-022-10	m 1.25	22	27.5	30.0	10	8 tol. H8	20	25	15	13.34	73.8
R5185.125-022-15	m 1.25	22	27.5	30.0	15	10 tol. H8	20	30	15	20.01	88.4
R5185.125-023-10	m 1.25	23	28.8	31.3	10	8 tol. H8	24	25	15	14.23	94.4
R5185.125-023-15	m 1.25	23	28.8	31.3	15	10 tol. H8	24	30	15	21.34	111.2
R5185.125-024-10	m 1.25	24	30.0	32.5	10	8 tol. H8	24	25	15	15.11	98.9
R5185.125-024-15	m 1.25	24	30.0	32.5	15	10 tol. H8	24	30	15	22.67	118.0
R5185.125-025-10	m 1.25	25	31.3	33.8	10	8 tol. H8	24	25	15	16.01	103.6
R5185.125-025-15	m 1.25	25	31.3	33.8	15	10 tol. H8	24	30	15	24.02	125.1
R5185.125-026-10	m 1.25	26	32.5	35.0	10	8 tol. H8	28	25	15	11.19	127.8
R5185.125-026-15	m 1.25	26	32.5	35.0	15	10 tol. H8	28	30	15	25.38	151.7
R5185.125-027-10	m 1.25	27	33.8	36.3	10	8 tol. H8	28	25	15	17.83	132.9
R5185.125-027-15	m 1.25	27	33.8	36.3	15	10 tol. H8	28	30	15	26.75	159.3
R5185.125-028-10	m 1.25	28	35.0	37.5	10	8 tol. H8	28	25	15	18.14	138.2
R5185.125-028-15	m 1.25	28	35.0	37.5	15	10 tol. H8	28	30	15	27.69	167.3
R5185.125-029-10	m 1.25	29	36.3	38.8	10	8 tol. H8	28	25	15	19.10	143.7
R5185.125-029-15	m 1.25	29	36.3	38.8	15	10 tol. H8	28	30	15	28.65	175.5
R5185.125-030-10	m 1.25	30	37.5	40.0	10	8 tol. H8	30	25	15	20.05	160.1
R5185.125-030-15	m 1.25	30	37.5	40.0	15	10 tol. H8	30	30	15	30.56	194.8
R5185.125-032-08	m 1.25	32	40.0	42.5	8	10	30	18	10	17.19	123.3
R5185.125-032-13	m 1.25	32	40.0	42.5	13	12	30	25	12	28.65	172.6
R5185.125-034-08	m 1.25	34	42.5	45.0	8	10	30	18	10	19.10	133.5



Spur Gears - Module 1.25

carbon steel - 18-120 teeth



Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	d_4	l_1	l_2	Torque Nm max.	Weight g
R5185.125-034-13	m 1.25	34	42.5	45.0	13	12	30	25	12	31.51	189.2
R5185.125-035-08	m 1.25	35	43.8	46.3	8	10	36	18	10	20.05	163.2
R5185.125-035-13	m 1.25	35	43.8	46.3	13	12	36	25	12	32.47	227.1
R5185.125-036-08	m 1.25	36	45.0	47.5	8	10	36	18	10	20.05	168.7
R5185.125-036-13	m 1.25	36	45.0	47.5	13	12	36	25	12	33.42	236.0
R5185.125-038-08	m 1.25	38	47.5	50.0	8	10	36	18	10	21.96	180.1
R5185.125-038-13	m 1.25	38	47.5	50.0	13	12	36	25	12	36.29	254.5
R5185.125-040-08	m 1.25	40	50.0	52.5	8	10	40	18	10	23.87	210.9
R5185.125-040-13	m 1.25	40	50.0	52.5	13	12	40	25	12	38.20	296.6
R5185.125-042-08	m 1.25	42	52.5	55.0	8	10	40	18	10	24.83	223.5
R5185.125-042-13	m 1.25	42	52.5	55.0	13	12	40	25	12	41.06	317.1
R5185.125-044-08	m 1.25	44	55.0	57.5	8	10	40	18	10	26.74	236.8
R5185.125-044-13	m 1.25	44	55.0	57.5	13	12	40	25	12	43.93	338.6
R5185.125-045-08	m 1.25	45	56.3	58.8	8	10	40	18	10	27.69	243.6
R5185.125-045-13	m 1.25	45	56.3	58.8	13	12	40	25	12	44.88	349.8
R5185.125-046-08	m 1.25	46	57.5	60.0	8	10	40	18	10	27.69	250.6
R5185.125-046-13	m 1.25	46	57.5	60.0	13	12	40	25	12	45.84	361.2
R5185.125-048-08	m 1.25	48	60.0	62.5	8	10	40	18	10	29.60	265.1
R5185.125-048-13	m 1.25	48	60.0	62.5	13	12	40	25	12	48.70	384.7
R5185.125-050-08	m 1.25	50	62.5	65.0	8	12	45	18	10	31.51	301.5
R5185.125-050-13	m 1.25	50	62.5	65.0	13	14	45	25	12	51.57	432.7
R5185.125-052-08	m 1.25	52	65.0	67.5	8	12	45	18	10	32.47	317.3
R5185.125-052-13	m 1.25	52	65.0	67.5	13	14	45	25	12	53.48	458.2
R5185.125-054-08	m 1.25	54	67.5	70.0	8	12	45	18	10	34.38	333.6
R5185.125-054-13	m 1.25	54	67.5	70.0	13	14	45	25	12	56.34	484.8
R5185.125-055-08	m 1.25	55	68.8	71.3	8	12	45	18	10	35.33	342.1
R5185.125-055-13	m 1.25	55	68.8	71.3	13	14	45	25	12	57.30	498.4
R5185.125-056-08	m 1.25	56	70.0	72.5	8	12	45	18	10	36.29	350.6
R5185.125-056-13	m 1.25	56	70.0	72.5	13	14	45	25	12	59.21	512.3
R5185.125-058-08	m 1.25	58	72.5	75.0	8	12	45	18	10	37.24	368.1
R5185.125-058-13	m 1.25	58	72.5	75.0	13	14	45	25	12	61.12	540.9
R5185.125-060-08	m 1.25	60	75.0	77.5	8	12	50	18	10	39.15	415.6
R5185.125-060-13	m 1.25	60	75.0	77.5	13	14	50	25	12	63.98	605.6
R5185.125-062-08	m 1.25	62	77.5	80.0	8	12	50	18	10	41.06	434.4
R5185.125-062-13	m 1.25	62	77.5	80.0	13	14	50	25	12	66.85	636.2
R5185.125-064-08	m 1.25	64	80.0	82.5	8	12	50	18	10	42.02	453.8
R5185.125-064-13	m 1.25	64	80.0	82.5	13	14	50	25	12	68.76	667.7
R5185.125-065-08	m 1.25	65	81.3	83.8	8	12	50	18	10	42.97	463.8
R5185.125-065-13	m 1.25	65	81.3	83.8	13	14	50	25	12	70.67	683.9
R5185.125-066-08	m 1.25	66	82.5	85.0	8	12	50	18	10	43.93	473.9
R5185.125-066-13	m 1.25	66	82.5	85.0	13	14	50	25	12	71.62	700.3
R5185.125-068-08	m 1.25	68	85.0	87.5	8	12	50	18	10	45.84	494.5
R5185.125-068-13	m 1.25	68	85.0	87.5	13	14	50	25	12	74.49	733.8
R5185.125-070-08	m 1.25	70	87.5	90.0	8	14	55	18	10	46.79	542.4
R5185.125-070-13	m 1.25	70	87.5	90.0	13	16	55	25	12	76.40	798.0
R5185.125-072-08	m 1.25	72	90.0	92.5	8	14	55	18	10	48.70	564.3
R5185.125-072-13	m 1.25	72	90.0	92.5	13	16	55	25	12	80.22	833.6
R5185.125-075-08	m 1.25	75	93.8	96.3	8	14	55	18	10	51.57	598.3
R5185.125-075-13	m 1.25	75	93.8	96.3	13	16	55	25	12	84.04	888.8
R5185.125-080-08	m 1.25	80	100.0	102.5	8	14	60	18	10	55.39	693.4
R5185.125-080-13	m 1.25	80	100.0	102.5	13	16	60	25	12	90.72	1028.0
R5185.125-084-08	m 1.25	84	105.0	107.5	8	14	60	18	10	58.25	740.0
R5185.125-084-13	m 1.25	84	105.0	107.5	13	16	60	25	12	95.50	1110.0
R5185.125-085-08	m 1.25	85	106.3	108.8	8	14	60	18	10	59.21	760.0
R5185.125-085-13	m 1.25	85	106.3	108.8	13	16	60	25	12	96.45	1130.0
R5185.125-090-08	m 1.25	90	112.5	115.0	8	16	65	18	10	63.03	860.0
R5185.125-090-13	m 1.25	90	112.5	115.0	13	18	65	25	12	103.14	1280.0
R5185.125-095-08	m 1.25	95	118.8	121.3	8	16	65	18	10	66.85	930.0
R5185.125-095-13	m 1.25	95	118.8	121.3	13	18	65	25	12	109.82	1390.0
R5185.125-096-08	m 1.25	96	120.0	122.5	8	16	65	18	10	67.80	940.0
R5185.125-096-13	m 1.25	96	120.0	122.5	13	18	65	25	12	110.78	1420.0
R5185.125-100-08	m 1.25	100	125.0	127.5	8	16	65	18	10	71.62	1000.0
R5185.125-100-13	m 1.25	100	125.0	127.5	13	18	65	25	12	116.51	1500.0
R5185.125-105-08	m 1.25	105	131.3	133.8	8	16	70	18	10	75.44	1120.0
R5185.125-105-13	m 1.25	105	131.3	133.8	13	18	70	25	12	123.19	1690.0
R5185.125-110-08	m 1.25	110	137.5	140.0	8	18	75	18	10	79.26	1240.0
R5185.125-110-13	m 1.25	110	137.5	140.0	13	20	75	25	12	129.88	1870.0

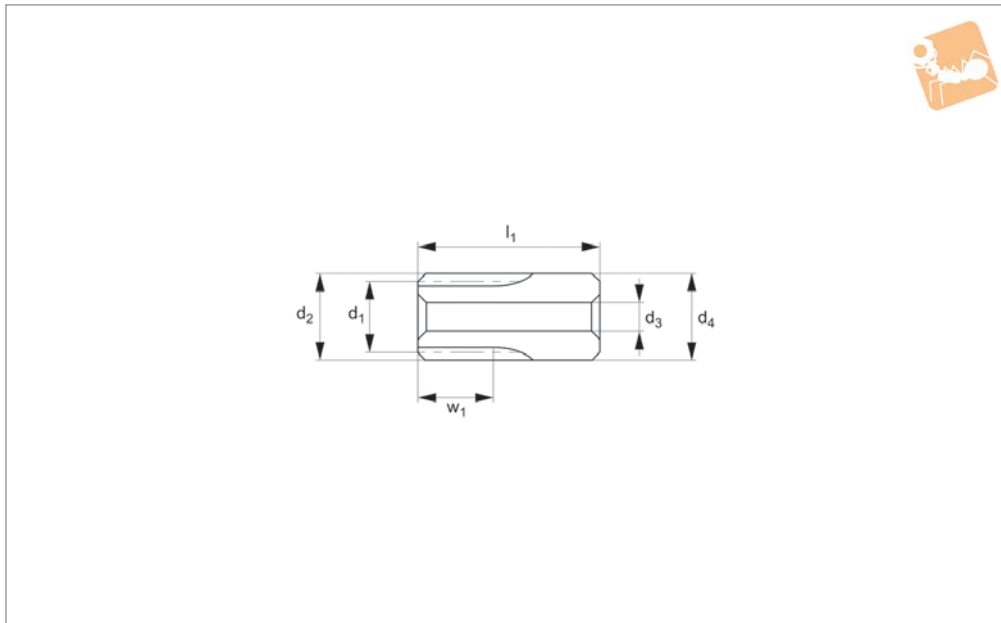


Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	d_4	l_1	l_2	Torque Nm max.	Weight g
R5185.125-115-08	m 1.25	115	143.8	146.3	8	18	75	18	10	84.04	1330.0
R5185.125-115-13	m 1.25	115	143.8	146.3	13	20	75	25	12	136.56	2010.0
R5185.125-120-08	m 1.25	120	150.0	152.5	8	18	80	18	10	87.86	1500.0
R5185.125-120-13	m 1.25	120	150.0	152.5	13	20	80	25	12	142.29	2220.0



Spur Gears - Module 1.5

stainless steel - 14 teeth



R5188

STANDARD SPUR GEARS

Material

Stainless steel (AISI 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,09 - 0,18mm.

Tips

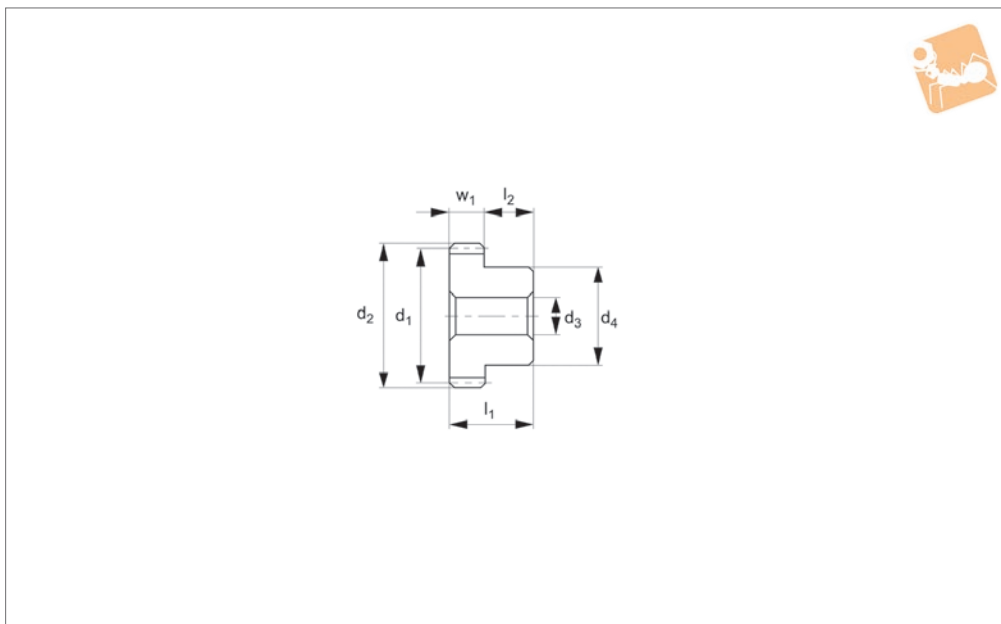
For module 1.5 stainless gears with 15-100 teeth see R5190.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	Torque Nm max.	Weight g
R5188.150-014	m 1.5	14	21	24	12	8	24	36	5.71	105



R5190



Material

Stainless steel (AISI 304, JIS G 4303).
Accuracy to JIS B 1702-1 (ISO) class 9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling

gears = 0,09 - 0,18mm.

Tips

For module 1.5 stainless gears with 14 teeth see R5188.
Max. allowable torque (Nm) is based on standard operating conditions (see tech-

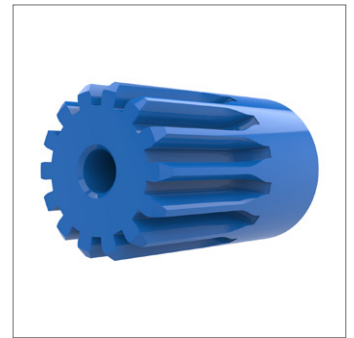
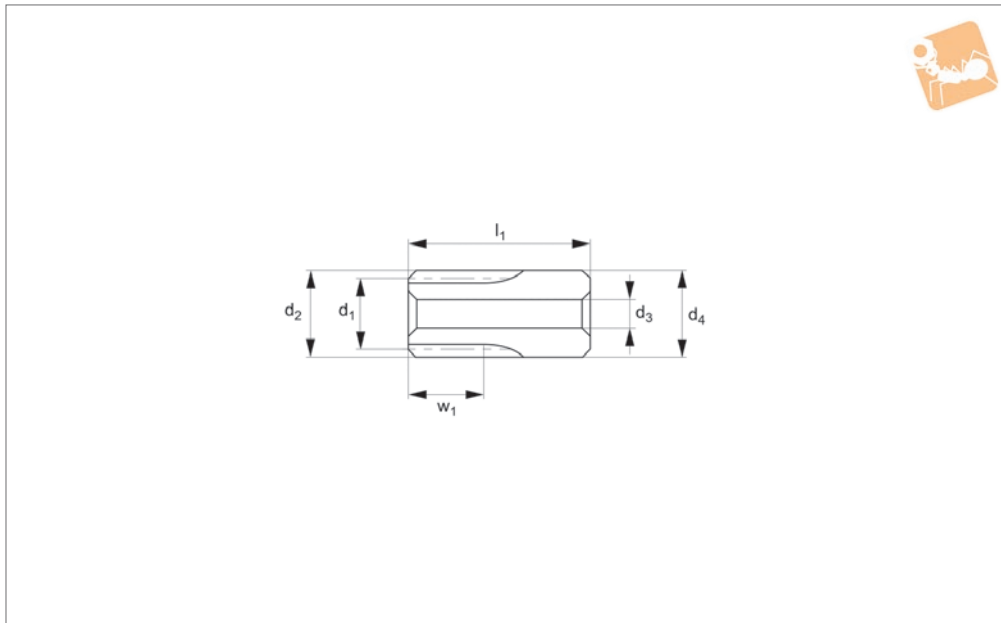
nical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H8	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5190.150-015-12	m 1.5	15	22.5	25.5	12	8	18	22	10	6.40	49.3
R5190.150-015-16	m 1.5	15	22.5	25.5	16	8	18	26	10	8.53	60.3
R5190.150-016-12	m 1.5	16	24.0	27.0	12	8	20	22	10	7.10	59.2
R5190.150-016-16	m 1.5	16	24.0	27.0	16	8	20	26	10	9.46	72.0
R5190.150-018-12	m 1.5	18	27.0	30.0	12	10	22	22	10	8.53	70.9
R5190.150-018-16	m 1.5	18	27.0	30.0	16	10	22	26	10	11.38	86.6
R5190.150-020-12	m 1.5	20	30.0	33.0	12	10	25	22	10	10.02	92.5
R5190.150-020-16	m 1.5	20	30.0	33.0	16	10	25	26	10	13.36	112.4
R5190.150-024-12	m 1.5	24	36.0	39.0	12	10	30	22	10	13.06	139.2
R5190.150-025-12	m 1.5	25	37.5	40.5	12	10	30	22	10	13.84	147.5
R5190.150-025-16	m 1.5	25	37.5	40.5	16	10	30	26	10	18.45	180.0
R5190.150-028-12	m 1.5	28	42.0	45.0	12	10	30	22	10	16.20	174.2
R5190.150-030-12	m 1.5	30	45.0	48.0	12	10	30	22	10	17.79	193.7
R5190.150-030-16	m 1.5	30	45.0	48.0	16	10	30	26	10	23.71	241.7
R5190.150-032-10	m 1.5	32	48.0	51.0	10	10	30	20	10	16.16	187.1
R5190.150-036-10	m 1.5	36	54.0	57.0	10	10	30	20	10	18.88	225.2
R5190.150-040-10	m 1.5	40	60.0	63.0	10	12	36	20	10	21.63	287.0
R5190.150-045-10	m 1.5	45	67.5	70.5	10	12	36	20	10	25.08	346.6
R5190.150-048-10	m 1.5	48	72.0	75.0	10	12	36	20	10	27.18	385.7
R5190.150-050-10	m 1.5	50	75.0	78.0	10	12	42	20	10	28.59	442.3
R5190.150-060-10	m 1.5	60	90.0	93.0	10	14	50	20	10	35.67	635.8
R5190.150-080-10	m 1.5	80	120.0	123.0	10	16	60	20	10	50.03	1089.0
R5190.150-090-10	m 1.5	90	135.0	138.0	10	16	60	20	10	57.21	1327.0
R5190.150-100-10	m 1.5	100	150.0	153.0	10	16	60	20	10	64.47	1594.0



Spur Gears - Module 1.5 - Plastic

blue polyacetal - 14 teeth



R5191

STANDARD SPUR GEARS

Material

Polyacetal, blue, machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,09-0,18mm.
Blue polyacetal machined gears are

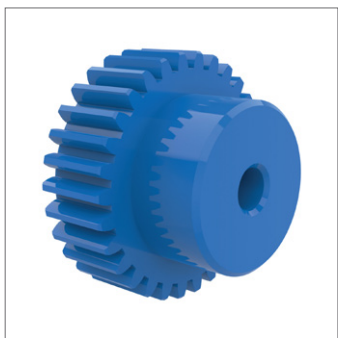
suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

Tips

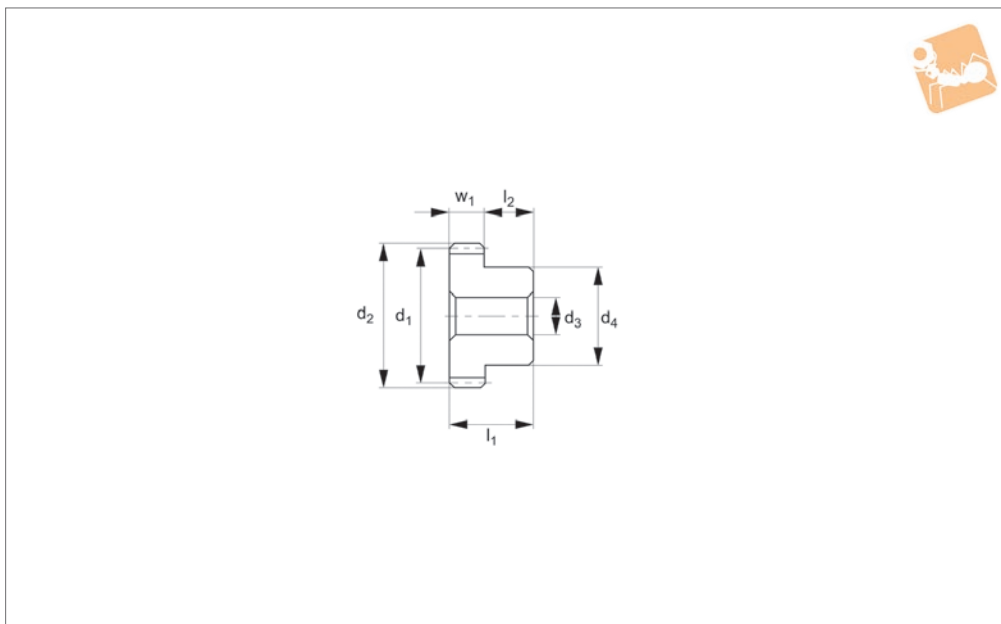
For module 1.5 blue plastic gears with 15-60 teeth see R5193.

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	Torque Nm max.	Weight g
R5191.150-014	m 1.5	14	21	24	18	6	24	40	1.36	21



R5193



Material

Polyacetal, blue, machined.
Accuracy to JIS B 1702-1 (ISO) class 9-10.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,09 - 0,18 mm.
Blue polyacetal machined gears are

suitable for use in food machinery applications. Approved by the FDA (USA) and by regulators in the EU and Japan, where the food has an alcohol percentage of <15%. Please clean gears thoroughly before use.

Tips

For module 1.5 blue plastic gears with 14 teeth see R5191.

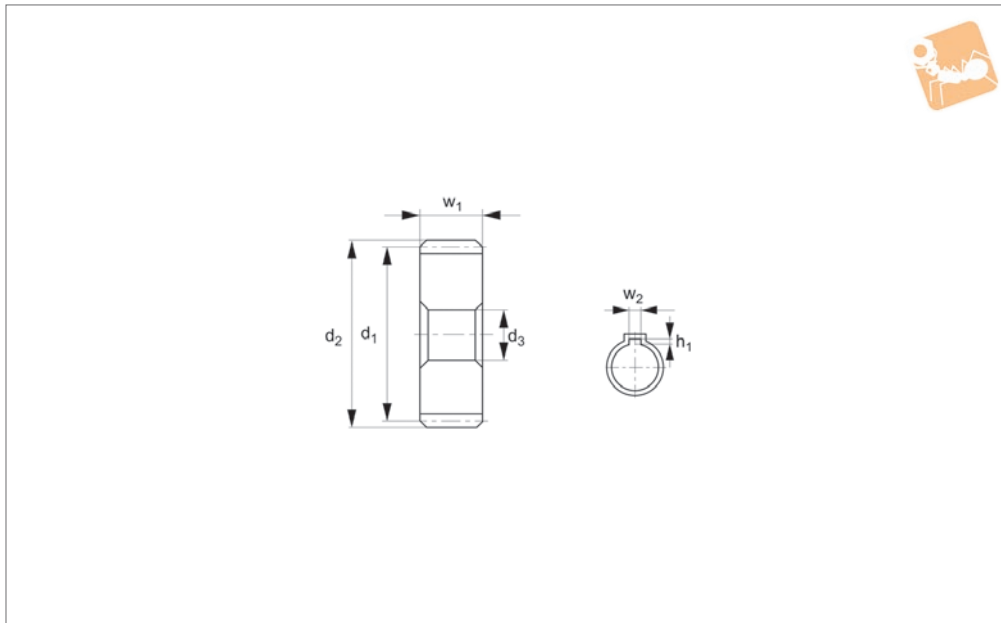
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	d ₄	l ₁	l ₂	Torque Nm max.	Weight g
R5193.150-015	m 1.5	15	22.5	25.5	15	6	18	30	15	1.51	12.4
R5193.150-016	m 1.5	16	24.0	27.0	15	6	18	30	15	1.65	13.6
R5193.150-018	m 1.5	18	27.0	30.0	15	8	20	30	15	1.94	16.4
R5193.150-020	m 1.5	20	30.0	33.0	15	8	22	30	15	2.23	20.6
R5193.150-022	m 1.5	22	33.0	36.0	15	8	24	30	15	2.53	25.3
R5193.150-024	m 1.5	24	36.0	39.0	15	8	24	30	15	2.82	28.7
R5193.150-025	m 1.5	25	37.5	40.5	15	8	28	30	15	2.97	32.8
R5193.150-026	m 1.5	26	39.0	42.0	15	8	28	30	15	3.12	35.9
R5193.150-028	m 1.5	28	42.0	45.0	15	8	30	30	15	3.41	41.8
R5193.150-030	m 1.5	30	45.0	48.0	15	8	32	30	15	3.83	48.2
R5193.150-032	m 1.5	32	48.0	51.0	15	8	35	30	15	4.14	56.2
R5193.150-035	m 1.5	35	52.5	55.5	15	8	40	30	15	4.60	69.9
R5193.150-036	m 1.5	36	54.0	57.0	15	8	40	30	15	4.75	72.5
R5193.150-040	m 1.5	40	60.0	63.0	15	10	45	30	15	5.53	89.7
R5193.150-045	m 1.5	45	67.5	70.5	15	10	50	30	15	6.33	113.5
R5193.150-048	m 1.5	48	72.0	75.0	15	10	55	30	15	6.81	132.6
R5193.150-050	m 1.5	50	75.0	78.0	15	10	55	30	15	7.13	139.9
R5193.150-055	m 1.5	55	82.5	85.5	15	10	60	30	15	7.93	136.8
R5193.150-056	m 1.5	56	84.0	87.0	15	10	60	30	15	8.09	173.2
R5193.150-060	m 1.5	60	90.0	93.0	15	10	65	30	15	8.90	200.9



Spur Gears - Module 1.5

carbon steel - 15-100 teeth



R5194

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,06 - 0,15mm

Tips

For module 1.5 steel gears with 60-100

teeth see R5195 (hubless) & R5204 (with hub),
for gears with 8-10 see teeth R5198 & R5199, for gears with 12-14 teeth see R5200, for gears with 15-100 teeth alternative see R5201 and R5204 (reduced weight version).
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For

non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Keyway (w ₂ x h ₁)	Torque Nm max.	Weight g
R5194.150-015-12-08	m 1.5	15	22.5	25.5	12	8	-	13.08	32.7
R5194.150-015-18-08	m 1.5	15	22.5	25.5	18	8	-	19.10	49.1
R5194.150-016-12-08	m 1.5	16	24.0	27.0	12	8	-	14.13	37.9
R5194.150-016-16-08	m 1.5	16	24.0	27.0	16	8	-	18.91	50.5
R5194.150-016-18-08	m 1.5	16	24.0	27.0	18	8	-	21.20	56.8
R5194.150-018-12-10	m 1.5	18	27.0	30.0	12	10	-	17.00	46.5
R5194.150-018-16-10	m 1.5	18	27.0	30.0	16	10	-	22.73	62.1
R5194.150-018-18-10	m 1.5	18	27.0	30.0	18	10	-	25.59	69.8
R5194.150-019-12-10	m 1.5	19	28.5	31.5	12	10	-	18.53	52.7
R5194.150-019-18-10	m 1.5	19	28.5	31.5	18	10	-	27.79	79.0
R5194.150-020-10-10	m 1.5	20	30.0	33.0	10	10	-	16.62	49.3
R5194.150-020-12-10	m 1.5	20	30.0	33.0	12	10	-	19.96	59.2
R5194.150-020-12-12	m 1.5	20	30.0	33.0	12	12	4x1,8	19.96	55.3
R5194.150-020-12-15	m 1.5	20	30.0	33.0	12	15	5x2,3	19.96	48.9
R5194.150-020-16-10	m 1.5	20	30.0	33.0	16	10	-	26.64	78.9
R5194.150-020-18-10	m 1.5	20	30.0	33.0	18	10	-	29.99	88.8
R5194.150-020-18-12	m 1.5	20	30.0	33.0	18	12	4x1,8	29.99	82.9
R5194.150-020-18-15	m 1.5	20	30.0	33.0	18	15	5x2,3	29.99	73.3
R5194.150-021-12-10	m 1.5	21	31.5	34.5	12	10	-	21.49	66.0
R5194.150-021-18-10	m 1.5	21	31.5	34.5	18	10	-	32.28	99.0
R5194.150-022-12-10	m 1.5	22	33.0	36.0	12	10	-	23.01	73.2
R5194.150-022-18-10	m 1.5	22	33.0	36.0	18	10	-	34.57	109.8
R5194.150-023-12-10	m 1.5	23	34.5	37.5	12	10	-	24.54	80.7
R5194.150-023-18-10	m 1.5	23	34.5	37.5	18	10	-	36.86	121.0
R5194.150-024-10-10	m 1.5	24	36.0	39.0	10	10	-	21.68	73.7
R5194.150-024-12-10	m 1.5	24	36.0	39.0	12	10	-	26.07	88.5



Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	Keyway (w ₂ x h ₁)	Torque Nm max.	Weight g
R5194.150-024-12-12	m 1.5	24	36.0	39.0	12	12	4×1,8	26.07	84.6
R5194.150-024-12-15	m 1.5	24	36.0	39.0	12	15	5×2,3	26.07	78.2
R5194.150-024-16-10	m 1.5	24	36.0	39.0	16	10	-	34.76	118.0
R5194.150-024-18-12	m 1.5	24	36.0	39.0	18	12	-	39.15	127.8
R5194.150-024-18-15	m 1.5	24	36.0	39.0	18	15	5×2,3	39.15	117.2
R5194.150-024-18-16	m 1.5	24	36.0	39.0	18	16	5×2,3	39.15	113.8
R5194.150-025-10-10	m 1.5	25	37.5	40.5	10	10	-	23.01	80.5
R5194.150-025-12-10	m 1.5	25	37.5	40.5	12	10	-	27.60	96.6
R5194.150-025-12-12	m 1.5	25	37.5	40.5	12	12	4×1,8	27.60	92.7
R5194.150-025-12-15	m 1.5	25	37.5	40.5	12	15	5×2,3	27.60	86.3
R5194.150-025-16-12	m 1.5	25	37.5	40.5	16	12	-	36.86	124.5
R5194.150-025-18-12	m 1.5	25	37.5	40.5	18	12	-	36.86	140.1
R5194.150-025-18-15	m 1.5	25	37.5	40.5	18	15	5×2,3	36.86	129.5
R5194.150-025-18-16	m 1.5	25	37.5	40.5	18	16	5×2,3	36.86	126.0
R5194.150-026-12-10	m 1.5	26	39.0	42.0	12	10	-	29.22	105.1
R5194.150-026-18-12	m 1.5	26	39.0	42.0	18	12	-	43.83	152.8
R5194.150-027-12-10	m 1.5	27	40.5	43.5	12	10	-	30.75	114.0
R5194.150-027-18-12	m 1.5	27	40.5	43.5	18	12	-	46.13	166.0
R5194.150-028-10-12	m 1.5	28	42.0	45.0	10	12	-	26.93	99.9
R5194.150-028-12-10	m 1.5	28	42.0	45.0	12	10	-	32.37	123.1
R5194.150-028-12-12	m 1.5	28	42.0	45.0	12	12	4×1,8	32.37	119.2
R5194.150-028-12-15	m 1.5	28	42.0	45.0	12	15	5×2,3	32.37	112.8
R5194.150-028-16-12	m 1.5	28	42.0	45.0	16	12	-	43.16	159.8
R5194.150-028-18-12	m 1.5	28	42.0	45.0	18	12	-	48.51	179.8
R5194.150-028-18-15	m 1.5	28	42.0	45.0	18	15	5×2,3	48.51	169.2
R5194.150-028-18-20	m 1.5	28	42.0	45.0	18	20	6×2,8	48.51	149.0
R5194.150-029-12-10	m 1.5	29	43.5	46.5	12	10	-	33.90	132.6
R5194.150-029-18-12	m 1.5	29	43.5	46.5	18	12	-	50.90	194.0
R5194.150-030-10-12	m 1.5	30	45.0	48.0	10	12	-	29.60	116.0
R5194.150-030-12-10	m 1.5	30	45.0	48.0	12	10	-	35.52	142.4
R5194.150-030-12-12	m 1.5	30	45.0	48.0	12	12	4×1,8	35.52	138.5
R5194.150-030-12-15	m 1.5	30	45.0	48.0	12	15	5×2,3	35.52	132.1
R5194.150-030-16-14	m 1.5	30	45.0	48.0	16	14	-	47.37	180.4
R5194.150-030-18-14	m 1.5	30	45.0	48.0	18	14	-	53.29	203.0
R5194.150-030-18-15	m 1.5	30	45.0	48.0	18	15	5×2,3	53.29	198.1
R5194.150-030-18-18	m 1.5	30	45.0	48.0	18	18	6×2,8	53.29	186.4
R5194.150-030-18-20	m 1.5	30	45.0	48.0	18	20	6×2,8	53.29	178.0
R5194.150-032-10-10	m 1.5	32	48.0	51.0	10	10	-	32.28	135.9
R5194.150-032-10-12	m 1.5	32	48.0	51.0	10	12	4×1,8	32.28	132.6
R5194.150-032-10-15	m 1.5	32	48.0	51.0	10	15	5×2,3	32.28	127.3
R5194.150-032-16-14	m 1.5	32	48.0	51.0	16	14	-	51.66	207.9
R5194.150-032-16-15	m 1.5	32	48.0	51.0	16	15	5×2,3	51.66	203.6
R5194.150-032-16-18	m 1.5	32	48.0	51.0	16	18	6×2,8	51.66	193.2
R5194.150-032-16-20	m 1.5	32	48.0	51.0	16	20	6×2,8	51.66	185.7
R5194.150-034-10-12	m 1.5	34	51.0	54.0	10	12	-	34.95	151.5
R5194.150-034-16-14	m 1.5	34	51.0	54.0	16	14	-	55.96	237.2
R5194.150-035-10-12	m 1.5	35	52.5	55.5	10	12	-	36.38	161.1
R5194.150-035-16-14	m 1.5	35	52.5	55.5	16	14	-	58.16	252.6
R5194.150-036-10-12	m 1.5	36	54.0	57.0	10	12	-	37.72	170.9
R5194.150-036-10-15	m 1.5	36	54.0	57.0	10	15	5×2,3	37.72	165.0
R5194.150-036-10-16	m 1.5	36	54.0	57.0	10	16	5×2,3	37.72	163.1
R5194.150-036-16-14	m 1.5	36	54.0	57.0	16	14	-	60.35	268.3
R5194.150-036-16-15	m 1.5	36	54.0	57.0	16	15	5×2,3	60.35	264.0
R5194.150-036-16-18	m 1.5	36	54.0	57.0	16	18	6×2,8	60.35	253.6
R5194.150-036-16-20	m 1.5	36	54.0	57.0	16	20	6×2,8	60.35	246.1
R5194.150-038-10-12	m 1.5	38	57.0	60.0	10	12	-	40.49	191.4
R5194.150-038-16-14	m 1.5	38	57.0	60.0	16	14	-	64.75	301.2
R5194.150-040-10-12	m 1.5	40	60.0	63.0	10	12	-	43.16	213.1
R5194.150-040-10-15	m 1.5	40	60.0	63.0	10	15	5×2,3	43.16	207.2
R5194.150-040-10-16	m 1.5	40	60.0	63.0	10	16	5×2,3	43.16	205.3
R5194.150-040-10-18	m 1.5	40	60.0	63.0	10	18	6×2,8	43.16	200.7
R5194.150-040-16-14	m 1.5	40	60.0	63.0	16	14	-	69.14	335.8
R5194.150-040-16-15	m 1.5	40	60.0	63.0	16	15	5×2,3	69.14	331.5
R5194.150-040-16-18	m 1.5	40	60.0	63.0	16	18	6×2,8	69.14	321.1
R5194.150-040-16-20	m 1.5	40	60.0	63.0	16	20	6×2,8	69.14	313.6
R5194.150-042-10-12	m 1.5	42	63.0	66.0	10	12	-	45.93	235.8
R5194.150-042-16-12	m 1.5	42	63.0	66.0	16	12	-	73.63	377.3



Spur Gears - Module 1.5

carbon steel - 15-100 teeth

Standard Spur Gears

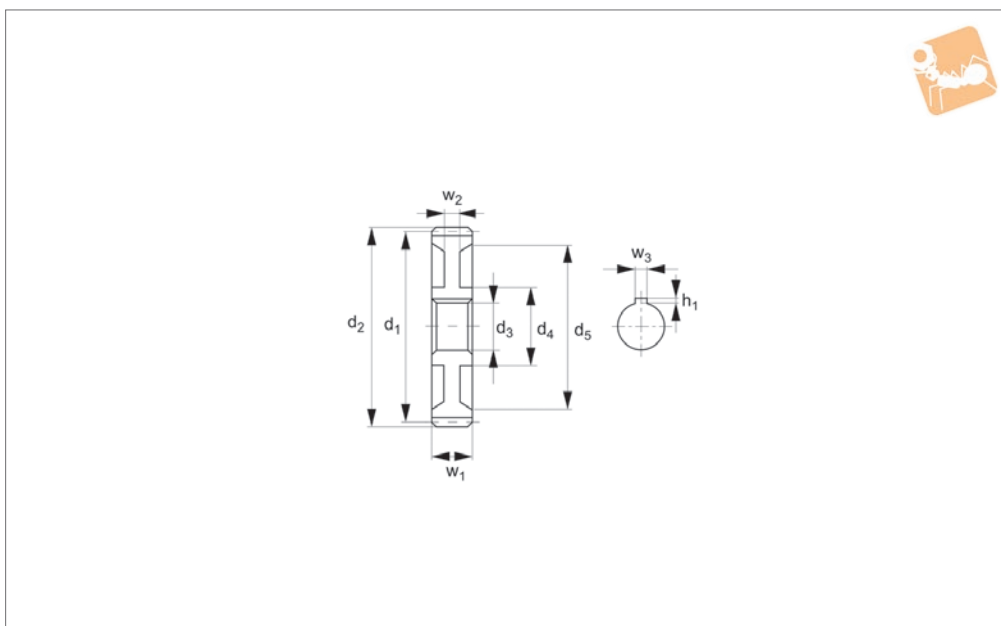


Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. H7	Keyway ($w_2 \times h_1$)	Torque Nm max.	Weight g
R5194.150-044-10-12	m 1.5	44	66.0	69.0	10	12	-	48.70	259.7
R5194.150-044-16-12	m 1.5	44	66.0	69.0	16	12	-	78.31	415.5
R5194.150-045-10-12	m 1.5	45	67.5	70.5	10	12	-	50.14	272.0
R5194.150-045-16-12	m 1.5	45	67.5	70.5	16	12	-	80.22	435.3
R5194.150-046-10-12	m 1.5	46	69.0	72.0	10	12	-	51.47	284.7
R5194.150-046-16-12	m 1.5	46	69.0	72.0	16	12	-	82.13	455.4
R5194.150-048-10-14	m 1.5	48	72.0	75.0	10	14	-	53.48	307.5
R5194.150-048-10-15	m 1.5	48	72.0	75.0	10	15	5×2,3	53.48	304.8
R5194.150-048-10-16	m 1.5	48	72.0	75.0	10	16	5×2,3	53.48	302.9
R5194.150-048-10-18	m 1.5	48	72.0	75.0	10	18	6×2,8	53.48	298.3
R5194.150-048-16-16	m 1.5	48	72.0	75.0	16	16	-	86.90	486.1
R5194.150-048-16-20	m 1.5	48	72.0	75.0	16	20	6×2,8	86.90	469.8
R5194.150-050-10-14	m 1.5	50	75.0	78.0	10	14	-	56.34	334.7
R5194.150-050-10-15	m 1.5	50	75.0	78.0	10	15	5×2,3	56.34	332.0
R5194.150-050-10-18	m 1.5	50	75.0	78.0	10	18	6×2,8	56.34	325.5
R5194.150-050-10-20	m 1.5	50	75.0	78.0	10	20	6×2,8	56.34	320.8
R5194.150-050-16-16	m 1.5	50	75.0	78.0	16	16	-	84.99	529.6
R5194.150-050-16-20	m 1.5	50	75.0	78.0	16	20	6×2,8	84.99	513.3
R5194.150-050-16-25	m 1.5	50	75.0	78.0	16	25	8×3,3	84.99	489.9
R5194.150-052-10-14	m 1.5	52	78.0	81.0	10	14	-	59.21	363.0
R5194.150-052-16-16	m 1.5	52	78.0	81.0	16	16	-	96.45	574.9
R5194.150-054-10-14	m 1.5	54	81.0	84.0	10	14	-	62.07	392.4
R5194.150-054-16-16	m 1.5	54	81.0	84.0	16	16	-	100.27	622.0
R5194.150-055-10-14	m 1.5	55	82.5	85.5	10	14	-	63.98	407.5
R5194.150-055-16-16	m 1.5	55	82.5	85.5	16	16	-	103.14	646.2
R5194.150-056-10-14	m 1.5	56	84.0	87.0	10	14	-	64.94	422.9
R5194.150-056-10-15	m 1.5	56	84.0	87.0	10	15	5×2,3	64.94	420.3
R5194.150-056-10-18	m 1.5	56	84.0	87.0	10	18	6×2,8	64.94	413.7
R5194.150-056-16-16	m 1.5	56	84.0	87.0	16	16	-	105.05	670.8
R5194.150-056-16-20	m 1.5	56	84.0	87.0	16	20	6×2,8	105.05	654.5
R5194.150-058-10-14	m 1.5	58	87.0	90.0	10	14	-	67.80	454.6
R5194.150-058-16-16	m 1.5	58	87.0	90.0	16	16	-	109.82	721.4
R5194.150-060-10-14	m 1.5	60	90.0	93.0	10	14	-	70.67	487.3
R5194.150-060-10-15	m 1.5	60	90.0	93.0	10	15	5×2,3	70.67	484.6
R5194.150-060-10-18	m 1.5	60	90.0	93.0	10	18	6×2,8	70.67	478.1
R5194.150-060-10-20	m 1.5	60	90.0	93.0	10	20	6×2,8	70.67	473.4
R5194.150-060-16-16	m 1.5	60	90.0	93.0	16	16	-	114.60	773.8
R5194.150-064-10-14	m 1.5	64	96.0	99.0	10	14	-	76.40	560.0
R5194.150-064-10-15	m 1.5	64	96.0	99.0	10	15	5×2,3	76.40	550.0
R5194.150-064-10-18	m 1.5	64	96.0	99.0	10	18	6×2,8	76.40	550.0
R5194.150-064-16-16	m 1.5	64	96.0	99.0	16	16	-	123.19	880.0
R5194.150-068-10-14	m 1.5	68	102.0	105.0	10	14	-	83.08	630.0
R5194.150-068-16-16	m 1.5	68	102.0	105.0	16	16	-	132.74	1000.0
R5194.150-070-10-14	m 1.5	70	105.0	108.0	10	14	-	85.95	670.0
R5194.150-070-10-15	m 1.5	70	105.0	108.0	10	15	5×2,3	85.95	670.0
R5194.150-070-10-18	m 1.5	70	105.0	108.0	10	18	6×2,8	85.95	660.0
R5194.150-070-16-16	m 1.5	70	105.0	108.0	16	16	-	136.56	1060.0
R5194.150-072-10-16	m 1.5	72	108.0	111.0	10	16	-	88.81	700.0
R5194.150-072-10-18	m 1.5	72	108.0	111.0	10	18	6×2,8	88.81	700.0
R5194.150-072-10-20	m 1.5	72	108.0	111.0	10	20	6×2,8	88.81	690.0
R5194.150-072-16-18	m 1.5	72	108.0	111.0	16	18	-	141.34	1120.0
R5194.150-075-10-16	m 1.5	75	112.5	115.5	10	16	-	92.63	760.0
R5194.150-075-16-18	m 1.5	75	112.5	115.5	16	18	-	148.98	1220.0
R5194.150-080-10-16	m 1.5	80	120.0	123.0	10	16	-	100.27	870.0
R5194.150-080-10-18	m 1.5	80	120.0	123.0	10	18	6×2,8	100.27	870.0
R5194.150-080-10-20	m 1.5	80	120.0	123.0	10	20	6×2,8	100.27	860.0
R5194.150-080-16-18	m 1.5	80	120.0	123.0	16	18	-	148.98	1390.0
R5194.150-084-10-16	m 1.5	84	126.0	129.0	10	16	-	105.05	960.0
R5194.150-084-16-22	m 1.5	84	126.0	129.0	16	22	-	148.98	1520.0
R5194.150-090-10-16	m 1.5	90	135.0	138.0	10	16	-	114.60	1110.0
R5194.150-090-16-22	m 1.5	90	135.0	138.0	16	22	-	183.35	1750.0
R5194.150-100-10-16	m 1.5	100	150.0	153.0	10	16	-	128.92	1370.0
R5194.150-100-10-18	m 1.5	100	150.0	153.0	10	18	6×2,8	128.92	1370.0
R5194.150-100-10-20	m 1.5	100	150.0	153.0	10	20	6×2,8	128.92	1360.0
R5194.150-100-16-18	m 1.5	100	150.0	153.0	16	18	-	206.27	2190.0

STANDARD SPUR GEARS



R5195



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,06 - 0,15mm. This is a reduced

weight version of the hubless gears R5194.

Tips

For module 1.5 hubless steel gears with 60-100 teeth see R5194. For gears with 8-10 teeth see R5198 & R5199, for 12-14 teeth see R5200, for gears with 15-100 teeth See R5201 & R5194 (reduced weight

version).

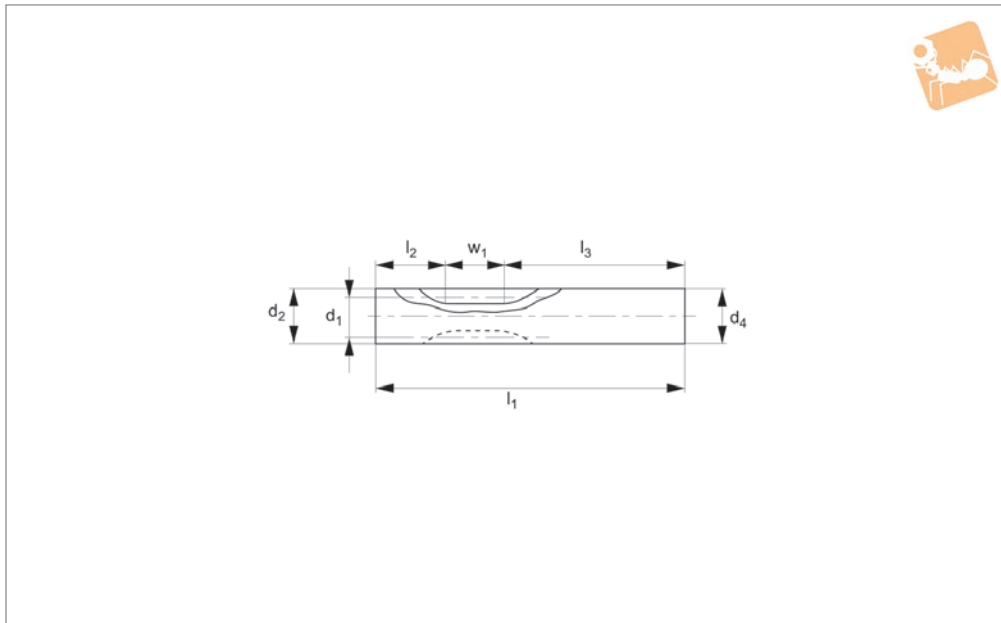
Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H7	d ₄	d ₅	Keyway (w ₃ x h ₁)	Torque Nm max.	w ₂	Weight g
R5195.150-060-40	m 1.5	60	90	93	16	20	40	76	6x2,8	114.60	8	568.5
R5195.150-060-50	m 1.5	60	90	93	16	25	50	76	8x3,3	114.60	8	589.4
R5195.150-064-40	m 1.5	64	96	99	16	20	40	82	6x2,8	123.19	8	630.0
R5195.150-070-40	m 1.5	70	105	108	16	20	40	91	6x2,8	136.56	8	740.0
R5195.150-072-40	m 1.5	72	108	111	16	20	40	94	6x2,8	141.34	8	770.0
R5195.150-072-50	m 1.5	72	108	111	16	25	50	94	8x3,3	141.34	8	790.0
R5195.150-080-40	m 1.5	80	120	123	16	20	40	106	6x2,8	160.43	8	930.0
R5195.150-080-50	m 1.5	80	120	123	16	25	50	106	8x3,3	160.43	8	950.0
R5195.150-100-40	m 1.5	100	150	153	16	20	40	136	6x2,8	206.27	8	1380.0
R5195.150-100-50	m 1.5	100	150	153	16	25	50	136	8x3,3	206.27	8	1400.0



Spur Gears - Module 1.5

carbon steel - 8-10 teeth



R5198

STANDARD SPUR GEARS

Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,06 - 0,15mm. Rack shift coefficient x = 0.5.

cient x = 0.5.

Tips

For module 1.5 hubless steel gears with 60-100 teeth see R5194. For gears with 8-10 teeth see R5198 & R5199, for gears with 12-14 teeth see R5200, for gears with 15-100 teeth See R5201 &

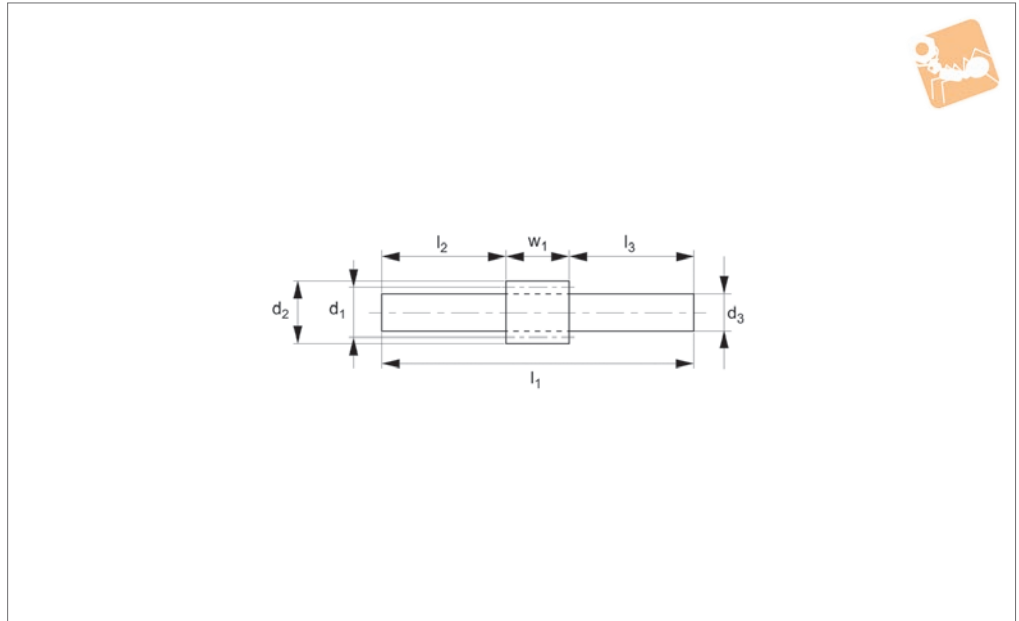
R5204 (reduced weight version).

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d ₁	d ₂	w ₁	d ₃ tol. H9	l ₁	l ₂	l ₃	Torque Nm max.	Weight g
R5198.150-08	m 1.5	8	Shifted Gear *	16	18	16	90	24	48	10.31	133.3
R5198.150-10	m 1.5	10	Shifted Gear *	19	18	19	90	24	48	14.23	190.5



R5199



Material

Carbon steel (ISO C45).
Accuracy to JIS B 1702-1 (ISO) class 8-9.

Technical Notes

20° pressure angle, full depth tooth.
Amount of backlash when assembling gears = 0,06 - 0,15mm. Rack shift coefficient $x = 0.5$.

Tips

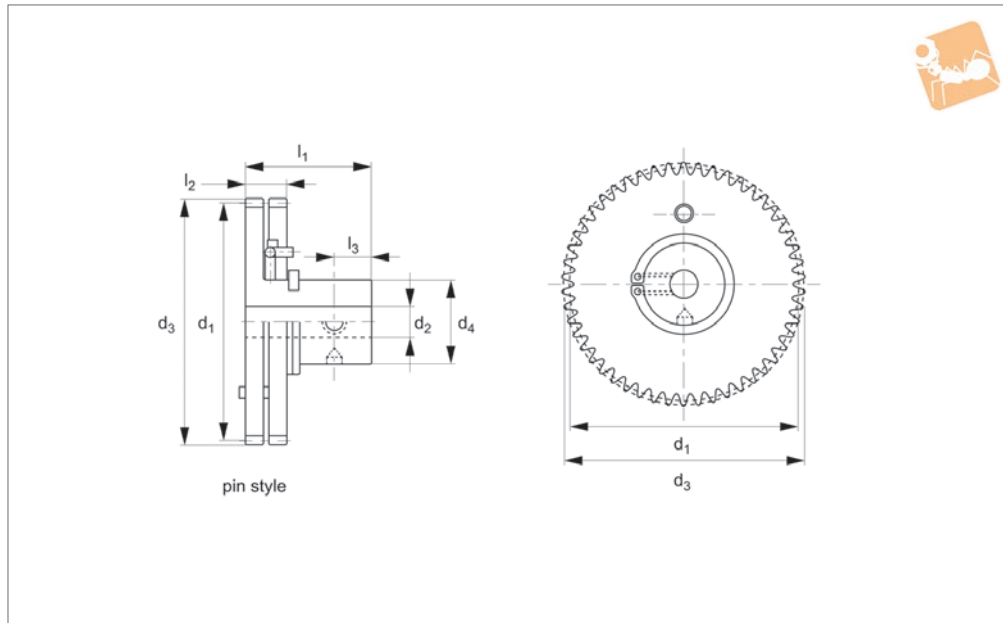
For module 1.5 hubless steel gears with 60-100 teeth see R5194.
For gears with 8-10 teeth alternative see R5198,
for gears with 12-14 teeth see R5200,
for gears with 15-100 teeth See R5201 & R5204 (reduced weight version).

Max. allowable torque (Nm) is based on standard operating conditions (see technical pages) with a safety factor of 1.2. For non standard applications apply a suitable safety factor depending on frequency of use, type of working etc.

Order No.	Module	No. of teeth z	Pitch dia. d_1	d_2	w_1	d_3 tol. h9	l_1	l_2	l_3	Torque Nm max.	Weight g
R5199.150-008	m 1.5	8	Shifted gear *	16	18	9	90	24	48	10.31	56.2
R5199.150-010	m 1.5	10	Shifted gear *	19	18	12	90	24	48	14.23	94.1



1,0 to 0,5 Module Anti-backlash stainless steel or aluminium pin hub



R2080

STANDARD SPUR GEARS

Material

Stainless steel (DIN 1,4305) or aluminium (DIN 3,1355 anodized before cutting).

Technical Notes

20° pressure angle, zero backlash.
Quality class DIN 7, AGMA 10.
The split gear design incorporates springs

which force the floating gear in a direction opposite to the rotation of the fixed gear, effectively enlarging the teeth width and overcoming the space, or backlash, between the teeth of the gear. Two types of design, one utilising scissor springs (figure

1), and the second, for larger diameter gears, utilising extension springs (figure 2).

Tips

Special versions available on request (e.g. different number of teeth, 14,5° pressure angle etc).

Order No.	No. of teeth	d ₁ p.d.	d ₂ tol. H8	d ₃	l ₁	l ₂	Module
R2080.1.0-18-S	18	18.0	8	20.0	14	6	1.0
R2080.1.0-21-S	21	21.0	8	23.0	14	6	1.0
R2080.1.0-24-S	24	24.0	8	26.0	14	6	1.0
R2080.0.8-24-S	24	19.2	8	20.8	14	6	0.8
R2080.0.8-28-S	28	22.4	8	24.0	14	6	0.8
R2080.0.8-32-S	32	25.6	8	27.2	14	6	0.8
R2080.0.6-28-S	28	16.8	8	18.0	14	6	0.6
R2080.0.6-32-S	32	19.2	8	20.4	14	6	0.6
R2080.0.6-36-S	36	21.6	8	22.8	14	6	0.6
R2080.0.5-36-S	36	18.0	8	19.0	14	6	0.5
R2080.0.5-42-S	42	21.0	8	22.0	14	6	0.5
R2080.0.5-48-S	48	24.0	8	25.0	14	6	0.5
R2080.1.0-18-A	18	18.0	8	20.0	14	6	1.0
R2080.1.0-21-A	21	21.0	8	23.0	14	6	1.0
R2080.1.0-24-A	24	24.0	8	26.0	14	6	1.0
R2080.0.8-24-A	24	19.2	8	20.8	14	6	0.8
R2080.0.8-28-A	28	22.4	8	24.0	14	6	0.8
R2080.0.8-32-A	32	25.6	8	27.2	14	6	0.8
R2080.0.6-28-A	28	16.8	8	18.0	14	6	0.6
R2080.0.6-32-A	32	19.2	8	20.4	14	6	0.6
R2080.0.6-36-A	36	21.6	8	22.8	14	6	0.6
R2080.0.5-36-A	36	18.0	8	19.0	14	6	0.5
R2080.0.5-42-A	42	21.0	8	22.0	14	6	0.5
R2080.0.5-48-A	48	24.0	8	25.0	14	6	0.5



R2082



Material
Carbon Steel

Quality class DIN 7, AGMA 10.

pressure angle, quality class DIN 5 & 3 etc).

Technical Notes
20° pressure angle.

Tips
Special versions available on request
(e.g. different number of teeth, 14.5°

Order No.	No. of teeth	d ₁	d ₂	d ₃	d ₄	w ₁	w ₂	w ₃	h
R2082.015-008	15	8	18	22.5	25.5	12	10	-	-
R2082.016-008	16	8	20	24	27	12	10	-	-
R2082.018-010	18	10	22	27	30	12	10	-	-
R2082.020-010	20	10	25	30	33	12	10	-	-
R2082.024-010	24	10	30	36	39	12	10	-	-
R2082.025-010	25	10	32	37.5	40.5	12	10	-	-
R2082.028-010	28	10	36	42	45	12	10	-	-
R2082.030-010	30	10	40	45	48	12	10	-	-
R2082.032-010	32	10	40	48	51	10	10	-	-
R2082.036-010	36	10	50	54	57	10	10	-	-
R2082.040-012	40	12	50	60	63	10	10	-	-
R2082.048-012	48	12	50	72	75	10	10	-	-
R2082.050-012	50	12	50	75	78	10	10	-	-
R2082.056-014	56	14	50	84	87	10	10	-	-
R2082.060-014	60	14	50	90	93	10	10	-	-
R2082.064-014	64	14	50	96	99	10	10	-	-
R2082.070-014	70	14	50	105	108	10	10	-	-
R2082.072-015	72	15	50	108	111	10	10	-	-
R2082.080-015	80	15	60	120	123	10	10	-	-
R2082.100-015	100	15	60	150	153	10	10	-	-
R2082.020-015-K	20	15	25	30	33	12	10	5	2.3
R2082.025-015-K	25	15	30	37.5	40.5	12	10	5	2.3
R2082.028-015-K	28	15	30	42	45	12	10	5	2.3
R2082.030-015-K	30	15	30	45	48	12	10	5	2.3
R2082.036-015-K	36	15	30	54	57	10	10	5	2.3
R2082.040-018-K	40	18	36	60	63	10	10	6	2.8
R2082.048-018-K	48	18	36	72	75	10	10	6	2.8
R2082.050-018-K	50	18	36	75	78	10	10	6	2.8
R2082.056-015-K	56	15	30	84	87	10	10	5	2.3
R2082.060-018-K	60	18	36	90	93	10	10	6	2.8
R2082.064-015-K	64	15	30	96	99	10	10	5	2.3
R2082.070-015-K	70	15	30	105	108	10	10	5	2.3
R2082.072-018-K	72	18	36	108	111	10	10	6	2.8
R2082.080-018-K	80	18	36	120	123	10	10	6	2.8



Spur Gears

Steel



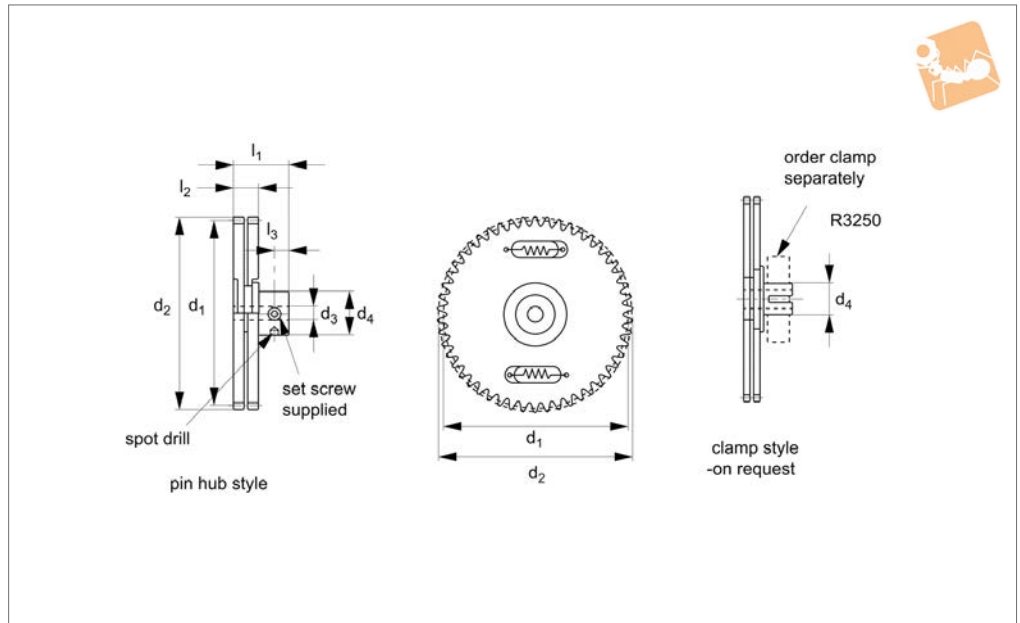
Standard Spur Gears

Order No.	No. of teeth	d_1	d_2	d_3	d_4	w_1	w_2	w_3	h
R2082.100-020-K	100	20	40	150	153	10	10	6	2.8

STANDARD SPUR GEARS



R2084



Material
A2 Stainless

Quality class DIN 7, AGMA 10.

pressure angle, quality class DIN 5 & 3 etc).

Technical Notes
20° pressure angle.

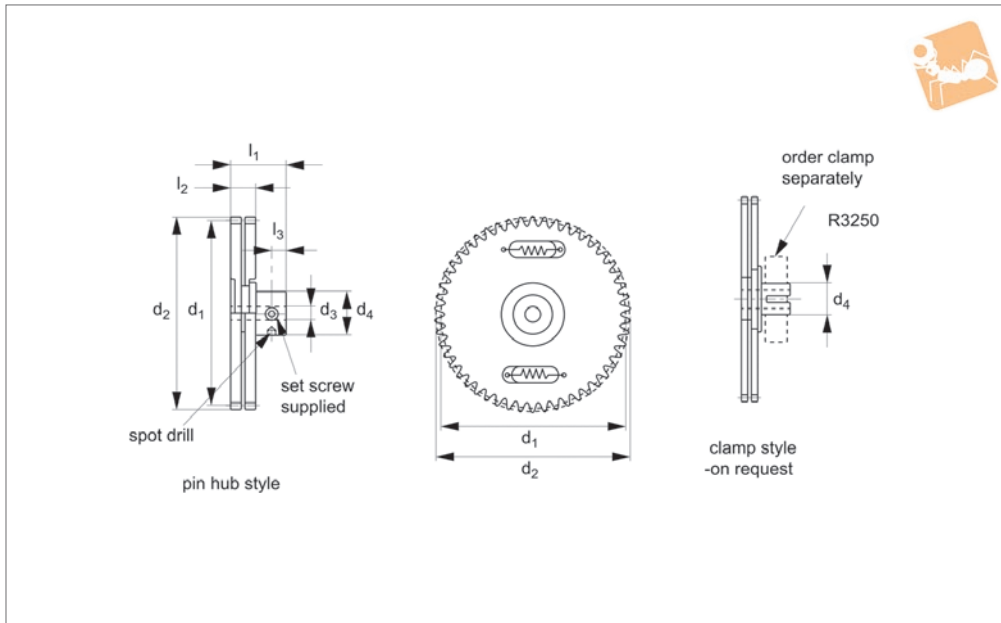
Tips
Special versions available on request (e.g. different number of teeth, 14.5°

Order No.	No. of teeth	d_1 p.d.	d_2	d_3	d_4	w_1	w_2
R2084.018-12-SS	18	12	20	27.0	30.0	25	12
R2084.020-12-SS	20	12	20	30.0	33.0	25	12
R2084.024-12-SS	24	12	20	36.0	39.0	25	12
R2084.028-12-SS	28	12	20	42.0	45.0	25	12
R2084.030-12-SS	30	12	20	45.0	48.0	25	12
R2084.032-12-SS	32	12	20	48.0	51.0	25	12
R2084.036-12-SS	36	12	20	54.0	57.0	25	12
R2084.040-12-SS	40	12	20	60.0	63.0	25	12
R2084.042-12-SS	42	12	20	63.0	66.0	25	12
R2084.045-12-SS	45	12	20	67.5	70.5	25	12
R2084.048-12-SS	48	12	20	72.0	75.0	25	12
R2084.050-12-SS	50	12	20	75.0	78.0	25	12
R2084.056-12-SS	56	12	20	84.0	87.0	25	12
R2084.060-12-SS	60	12	20	90.0	93.0	25	12
R2084.064-12-SS	64	12	20	96.0	99.0	25	12



Hubless Spur Gears

Stainless Steel



R2086

STANDARD SPUR GEARS

Material
A2 Stainless

Quality class DIN 7, AGMA 10.

pressure angle, quality class DIN 5 & 3 etc).

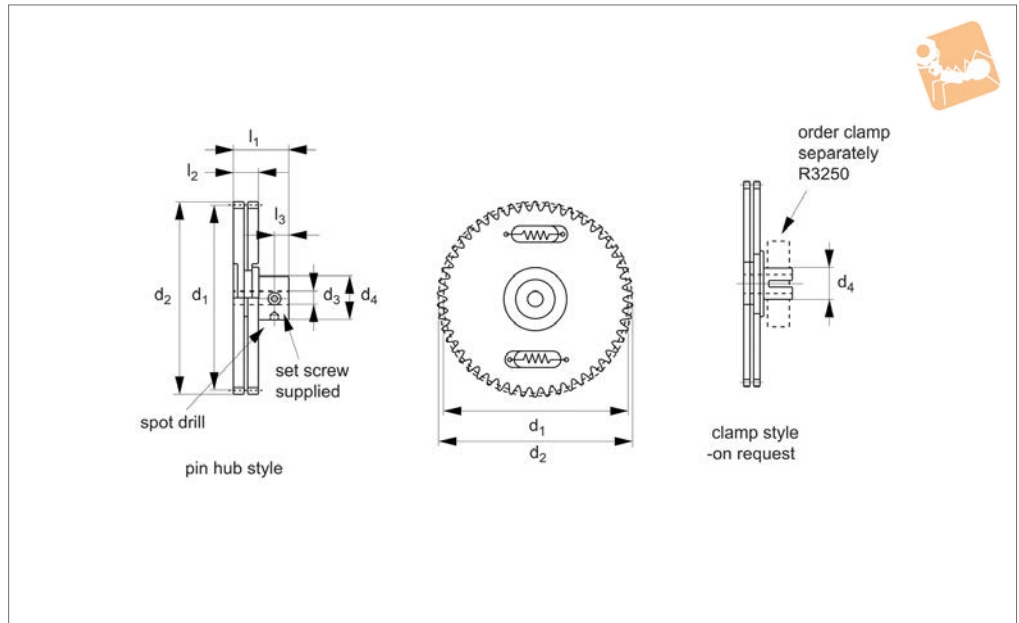
Technical Notes
20° pressure angle.

Tips
Special versions available on request (e.g. different number of teeth, 14.5°

Order No.	No. of teeth	d ₁ p.d.	d ₂	d ₃	w
R2086.018-16-SS	18	16	27.0	30.0	10
R2086.020-16-SS	20	16	30.0	33.0	10
R2086.024-16-SS	24	16	36.0	39.0	10
R2086.028-16-SS	28	16	42.0	45.0	10
R2086.030-16-SS	30	16	45.0	48.0	10
R2086.032-16-SS	32	16	48.0	51.0	10
R2086.036-16-SS	36	16	54.0	57.0	10
R2086.040-16-SS	40	16	60.0	63.0	10
R2086.042-16-SS	42	16	63.0	66.0	10
R2086.045-16-SS	45	16	67.5	70.5	10
R2086.048-16-SS	48	16	72.0	75.0	10
R2086.050-16-SS	50	16	75.0	78.0	10
R2086.056-16-SS	56	16	84.0	87.0	10
R2086.060-16-SS	60	16	90.0	93.0	10
R2086.064-16-SS	64	16	96.0	99.0	10



R2088



Material
Carbon Steel

ØH= 10 when bore=5mm
ØH= 13 when bore=8mm.

Tips
Special versions available on request (e.g. different number of teeth, 14.5° pressure angle, quality class DIN 5 & 3 etc).

Technical Notes
20° pressure angle.
Quality class DIN 7, AGMA 10.

Order No.	No. of teeth	Type	d ₁	d ₂	d ₃	d ₄	d ₅	w ₁	w ₂	w ₃	h
R2088.016-08-ST	16	W/o Keyway	8	-	-	24.0	27.0	18	-	-	-
R2088.018-10-ST	18	W/o Keyway	10	-	-	27.0	30.0	18	-	-	-
R2088.020-10-ST	20	W/o Keyway	10	-	-	30.0	33.0	18	-	-	-
R2088.024-12-ST	24	W/o Keyway	12	-	-	36.0	39.0	18	-	-	-
R2088.025-12-ST	25	W/o Keyway	12	-	-	37.5	40.5	18	-	-	-
R2088.028-12-ST	28	W/o Keyway	12	-	-	42.0	45.0	18	-	-	-
R2088.030-14-ST	30	W/o Keyway	14	-	-	45.0	48.0	18	-	-	-
R2088.032-14-ST	32	W/o Keyway	14	-	-	48.0	51.0	16	-	-	-
R2088.036-14-ST	36	W/o Keyway	14	-	-	54.0	57.0	16	-	-	-
R2088.040-14-ST	40	W/o Keyway	14	-	-	60.0	63.0	16	-	-	-
R2088.048-16-ST	48	W/o Keyway	16	-	-	72.0	75.0	16	-	-	-
R2088.050-16-ST	50	W/o Keyway	16	-	-	75.0	78.0	16	-	-	-
R2088.056-16-ST	56	W/o Keyway	16	-	-	84.0	87.0	16	-	-	-
R2088.060-16-ST	60	W/o Keyway	16	-	-	90.0	93.0	16	-	-	-
R2088.064-16-ST	64	W/o Keyway	16	-	-	96.0	99.0	16	-	-	-
R2088.070-16-ST	70	W/o Keyway	16	-	-	105.0	108.0	16	-	-	-
R2088.072-18-ST	72	W/o Keyway	18	-	-	108.0	111.0	18	-	-	-
R2088.080-18-ST	80	W/o Keyway	18	-	-	120.0	123.0	18	-	-	-
R2088.100-18-ST	100	W/o Keyway	18	-	-	150.0	153.0	18	-	-	-
R2088.020-14-ST	20	With Keyway	14	-	-	30.0	33.0	18	8	4	1.8
R2088.024-16-ST	24	With Keyway	16	-	-	36.0	39.0	18	8	5	2.3
R2088.025-16-ST	25	With Keyway	16	-	-	37.5	40.5	18	8	5	2.3
R2088.028-16-ST	28	With Keyway	16	-	-	42.0	45.0	18	8	5	2.3
R2088.030-18-ST	30	With Keyway	18	-	-	45.0	48.0	18	8	6	2.8
R2088.032-18-ST	32	With Keyway	18	-	-	48.0	51.0	16	8	6	2.8
R2088.036-18-ST	36	With Keyway	18	-	-	54.0	57.0	16	8	6	2.8
R2088.040-18-ST	40	With Keyway	18	-	-	60.0	63.0	16	8	6	2.8
R2088.048-20-ST	48	With Keyway	20	-	-	72.0	75.0	16	8	6	2.8
R2088.050-20-ST	50	With Keyway	20	-	-	75.0	78.0	16	8	6	2.8
R2088.056-20-ST	56	With Keyway	20	-	-	84.0	87.0	16	8	6	2.8
R2088.060-20-ST	60	With Keyway	20	40	76	90.0	93.0	16	8	6	2.8
R2088.064-20-ST	64	With Keyway	20	40	82	96.0	99.0	16	8	6	2.8
R2088.070-20-ST	70	With Keyway	20	40	91	105.0	108.0	16	8	6	2.8



Hubless Spur Gears

Steel

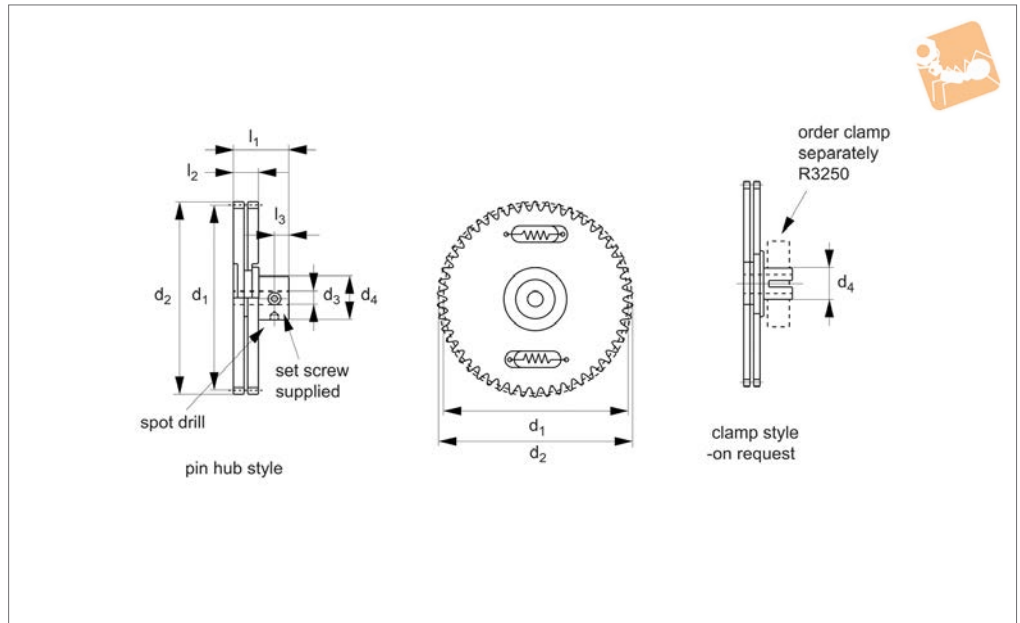


Standard Spur Gears

Order No.	No. of teeth	Type	d_1	d_2	d_3	d_4	d_5	w_1	w_2	w_3	h
R2088.072-25-ST	72	With Keyway	25	50	94	108.0	111.0	16	8	8	3.3
R2088.080-25-ST	80	With Keyway	25	50	106	120.0	123.0	16	8	8	3.3
R2088.100-25-ST	100	With Keyway	25	50	136	150.0	153.0	16	8	8	3.3



R2088.1



Material

Aluminium (DIN 3,1355 anodized before cutting).
Hub - stainless steel (DIN 1,4305).

Quality class DIN 7, AGMA 10.

ØH= 10 when bore=5mm
ØH= 13 when bore=8mm.

Tips

Special versions available on request (e.g. different number of teeth, 14.5° pressure angle, quality class DIN 5 & 3 etc).

Technical Notes

20° pressure angle.

Order No.	No. of teeth	d ₁ p.d.	d ₂ tol. H8	d ₃	l ₁	l ₂	Module
R2088.A065-08	65	39.0	8	40.2	10	3	0.6
R2088.A070-08	70	42.0	8	43.2	10	3	0.6
R2088.A072-08	72	43.2	8	44.4	10	3	0.6
R2088.A075-08	75	45.0	8	46.2	10	3	0.6
R2088.A080-08	80	48	8	49.2	10	3	0.6
R2088.A084-08	84	50.4	8	51.6	10	3	0.6
R2088.A085-08	85	51.0	8	52.2	10	3	0.6
R2088.A090-08	90	54.0	8	55.2	10	3	0.6
R2088.A095-08	95	57.0	8	58.2	10	3	0.6
R2088.A096-08	96	57.6	8	58.8	10	3	0.6
R2088.A100-08	100	60.0	8	61.2	10	3	0.6
R2088.A105-08	105	63.0	8	64.2	10	3	0.6
R2088.A110-08	110	66.0	8	67.2	10	3	0.6
R2088.A115-08	115	69.0	8	70.2	10	3	0.6
R2088.A120-08	120	72.0	8	73.2	10	3	0.6
R2088.A125-08	125	75.0	8	76.2	10	3	0.6
R2088.A130-08	130	78.0	8	79.2	10	3	0.6
R2088.A132-08	132	79.2	8	80.4	10	3	0.6
R2088.A140-08	140	84.0	8	85.2	10	3	0.6
R2088.A144-08	144	86.4	8	87.6	10	3	0.6
R2088.A150-08	150	90.0	8	91.2	10	3	0.6
R2088.A065-05	65	39.0	8	40.2	10	3	0.6
R2088.A070-05	70	42.0	8	43.2	10	3	0.6
R2088.A072-05	72	43.2	8	44.4	10	3	0.6
R2088.A075-05	75	45.0	8	46.2	10	3	0.6
R2088.A080-05	80	48.0	8	49.2	10	3	0.6
R2088.A084-05	84	50.4	8	51.6	10	3	0.6
R2088.A085-05	85	51.0	8	52.2	10	3	0.6
R2088.A090-05	90	54.0	8	55.2	10	3	0.6
R2088.A095-05	95	57.0	8	58.2	10	3	0.6
R2088.A096-05	96	57.6	8	58.8	10	3	0.6



0,6 Module Anti-backlash Gears

aluminium



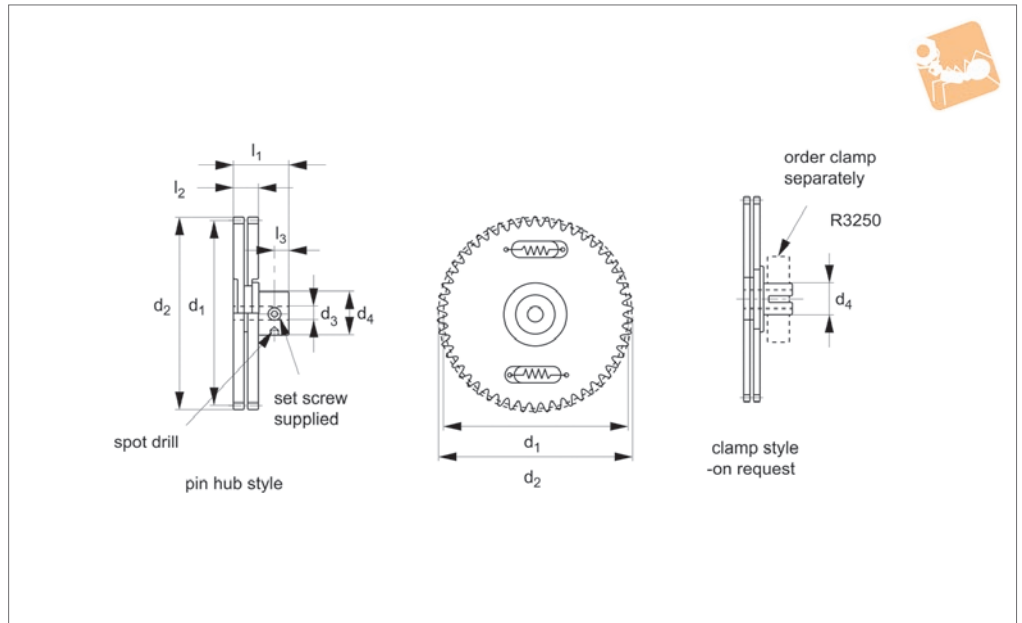
Standard Spur Gears

Order No.	No. of teeth	d ₁ p.d.	d ₂ tol. H8	d ₃	l ₁	l ₂	Module
R2088.A100-05	100	60.0	8	61.2	10	3	0.6
R2088.A105-05	105	63.0	8	64.2	10	3	0.6
R2088.A110-05	110	66.0	8	67.2	10	3	0.6
R2088.A115-05	115	69.0	8	70.2	10	3	0.6
R2088.A120-05	120	72.0	8	73.2	10	3	0.6
R2088.A125-05	125	75.0	8	76.2	10	3	0.6
R2088.A130-05	130	78.0	8	79.2	10	3	0.6
R2088.A132-05	132	79.2	8	80.4	10	3	0.6
R2088.A140-05	140	84.0	8	85.2	10	3	0.6
R2088.A144-05	144	86.4	8	87.6	10	3	0.6
R2088.A150-05	150	90.0	8	91.2	10	3	0.6

STANDARD SPUR GEARS



R2090



Material

Core - A2 Stainless Steel
 Gear - Machined from cast Nylon blocks

Quality class DIN 7, AGMA 10.
 $\emptyset H = 10$ when bore=5mm
 $\emptyset H = 13$ when bore=8mm.

(e.g. different number of teeth, 14.5° pressure angle, quality class DIN 5 & 3 etc).

Technical Notes

20° pressure angle.

Tips

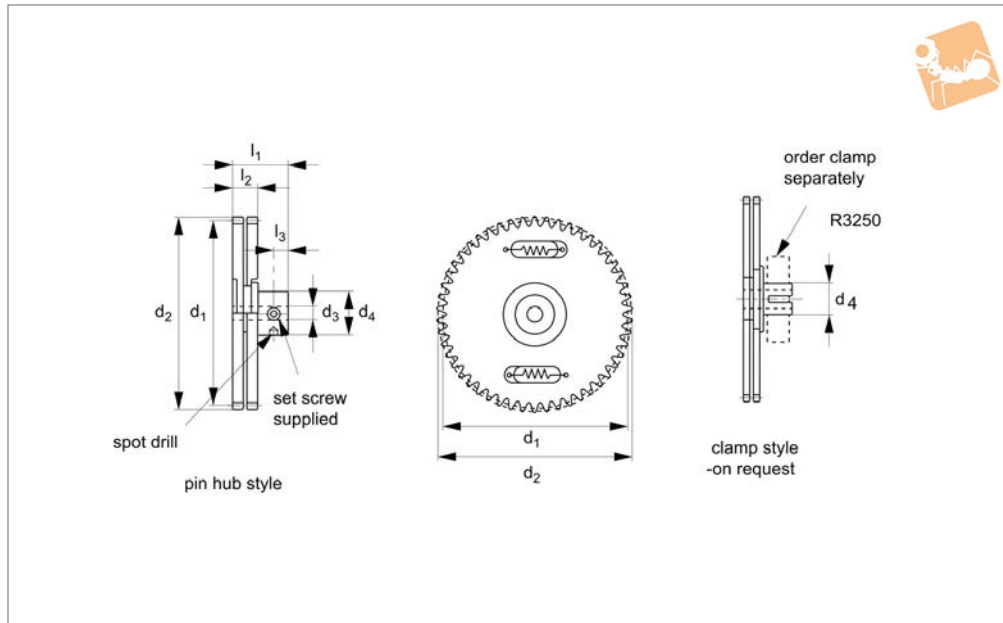
Special versions available on request

Order No.	No. of teeth	d_1	d_2	d_3	d_4	d_5	w_1	w_2	w_3
R2090.030-10	30	10	30	30	45.0	48.0	27	15	12
R2090.035-10	35	10	33	36	52.5	55.5	27	15	12
R2090.040-10	40	10	40	45	60.0	63.0	27	15	12
R2090.050-12	50	12	40	45	75.0	78.0	27	15	12
R2090.060-12	60	12	50	55	90.0	93.0	27	15	12
R2090.018-12	18	12	60	85	120.0	123.0	27	15	12



0,25 Module Anti-backlash Gears

stainless or aluminium



R2096

STANDARD SPUR GEARS

Material

Stainless steel (DIN 1,4305) or aluminium (DIN 3,1355 anodized before cutting).
Hub - stainless steel (DIN 1,4305).

Quality class DIN 7, AGMA 10.

ØH= 10 when bore=5mm
ØH= 13 when bore=8mm.

pressure angle, quality class DIN 5 & 3 etc).

Technical Notes

20° pressure angle.

Tips

Special versions available on request (e.g. different number of teeth, 14.5°

Order No.	No. of teeth	d ₁	d ₂	d ₃	d ₄	w ₁	w ₂	w ₃
R2096.015-12-SS	15	12	24	30	34	36	20	16
R2096.016-12-SS	16	12	26	32	36	36	20	16
R2096.018-12-SS	18	12	30	36	40	36	20	16
R2096.020-12-SS	20	12	32	40	44	36	20	16
R2096.022-12-SS	22	12	36	44	48	36	20	16
R2096.024-12-SS	24	12	38	48	52	36	20	16
R2096.025-12-SS	25	12	40	50	54	36	20	16
R2096.028-12-SS	28	12	45	56	60	36	20	16
R2096.030-12-SS	30	12	50	60	64	36	20	16