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# SPUR GEARS

Metric spur gears are available in a range of materials in module sizes from 0.5 to 6.0\*. All of the gears in this section have an involute tooth form with a pressure angle of 20°. The module sizes quoted in this catalogue are in accordance with DIN780.

\*Larger modules are available to order.

For examples of tooth profiles and geometrical data, see 'Technical Information' pages 192 - 194.

## Material Data for Plastic Gears

	Symbol / Units		Delrin	Acetal
Mechanical Properties	Quality		Opaque Procelain	Opaque Procelain
	Density	$\rho$ g / cm <sup>3</sup>	1.425	1.41
	Tensile Strength	$\sigma_s$ N / mm <sup>2</sup>	70	65
	Elongation at failure	$\epsilon_R$ %	25-40	40
	Modulus of Elasticity	E n / mm <sup>2</sup>	3300	3100
	Hardness	H <sub>k</sub> N / mm <sup>2</sup>	170	140
	Creep strength after 1000 h static load	$\sigma_{s, 1000}$ N / mm <sup>2</sup>	40	40
	Sliding coefficient of friction*	$\mu$	0.34	0.32
Thermal Properties	Melting Temperature	T <sub>s</sub> °C	175	165
	Heat resistance (ISO process A & B)	F <sub>ISO</sub> °C A/B	124 / 70	100 / 70
	Operating temperature limit (intermittent)	T <sub>max i</sub> °C	160	150
	Operating temperature limit (continuous)	T <sub>max c</sub> °C	100	100
	Coefficient of thermal conductivity	$\lambda$ W / Km	0.31	0.31
	Specific Heat capacity	c kJ / kg K	1.5	1.5
	Linear extension coefficient	$\alpha$ 10 <sup>-5</sup> / grd	10	10
Electrical Properties	Dielectric Number	$\epsilon_r$	3.7	3.5
	Dielectric loss factor	$\tan \delta$	0.0005	0.003
	Current flow resistance	pD $\Omega$ .cm		
	Dielectric strength	Ed kV / mm	>50	>50
	Creep tracking resistance	-	KA 3c	KA 3c
Chemical Resistance	Diluted Acid			
	Diluted Alkaline			
	Hydrocarbons (saturated oils/fats)			
	Aromatics			
	Ketones, Esters			
	Chlorinated Hydrocarbons			
	Hot water washing			
 Resistant  Conditionally Resistant  Not resistant				
Other Data	Humidity uptake NK 23/50 (sat.)	C <sub>WN</sub> %	0.3	0.3
	Water uptake (sat.)	C <sub>WS</sub> %	0.5	0.5
	Max lengthening by humidity in NK 23/50	$\Delta l / \Delta l_N$ %	0.15	0.15
	Combustibility (ASTM-D635 or UL-55)		b.	b.
	Outdoor exposure		UV Sensitive	UV Sensitive

## SPUR GEARS - ACETAL

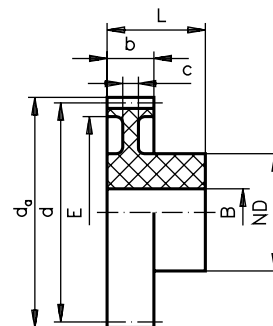
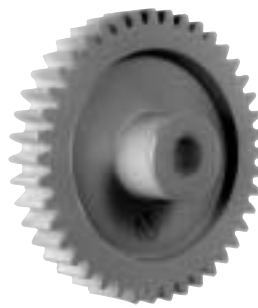
- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal

**Module** : 0.5

**Thickness (b)** : 3mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	O/A Length $L$	E	c	Bore $B$	Torque (Ncm)	Weight (g)
101 281 012	12	7	6	4	7	–	–	2	0.6	0.15
101 281 013	13	7.5	6.5	4	7	–	–	2	0.7	0.17
101 281 014	14	8	7	5	7	–	–	2	0.9	0.22
101 281 015	15	8.5	7.5	6	10	–	–	3	1.0	0.35
101 281 016	16	9	8	6	10	–	–	3	1.2	0.36
101 281 017	17	9.5	8.5	6	10	–	–	3	1.3	0.39
101 281 018	18	10	9	8	10	–	–	4	1.5	0.56
101 281 019	19	10.5	9.5	8	10	–	–	4	1.7	0.57
101 281 020	20	11	10	8	10	–	–	4	1.8	0.62
101 281 021	21	11.5	10.5	8	10	–	–	4	2.0	0.66
101 281 022	22	12	11	10	10	–	–	4	2.2	0.95
101 281 023	23	12.5	11.5	10	10	–	–	4	2.4	0.98
101 281 024	24	13	12	10	10	–	–	4	2.7	1.04
101 281 025	25	13.5	12.5	10	10	–	–	4	2.9	1.06
101 281 026	26	14	13	10	10	–	–	4	3.1	1.09
101 281 027	27	14.5	13.5	10	10	–	–	4	3.4	1.14
101 281 028	28	15	14	10	10	–	–	4	3.7	1.16
101 281 030	30	16	15	12	10	–	–	4	4.2	1.59
101 281 032	32	17	16	12	10	–	2	4	4.8	1.68
101 281 035	35	18.5	17.5	12	10	–	2	4	5.7	1.86
101 281 036	36	19	18	12	10	–	2	4	6.1	1.89
101 281 038	38	20	19	12	10	–	2	4	6.8	2.00
101 281 040	40	21	20	12	10	14.5	2	4	7.5	1.95
101 281 042	42	22	21	12	10	16	2	4	8.3	2.12
101 281 045	45	23.5	22.5	12	10	18.5	2	4	9.5	2.20
101 281 048	48	25	24	15	10	19	2	6	10.8	3.01
101 281 050	50	26	25	15	10	20	2	6	11.8	2.96
101 281 052	52	27	26	15	10	21	2	6	12.7	3.12
101 281 054	54	28	27	15	10	22	2	6	13.7	3.24
101 281 055	55	28.5	27.5	15	10	23	2	6	14.2	3.20
101 281 056	56	29	28	15	10	23	2	6	14.8	3.40
101 281 060	60	31	30	15	10	24	2	6	16.8	3.63
101 281 064	64	33	32	15	10	25	2	6	17.9	4.05
101 281 065	65	33.5	32.5	15	10	27	2	6	18.2	4.00
101 281 070	70	36	35	15	10	29	2	6	19.6	4.35
101 281 072	72	37	36	15	10	30	2	6	20.1	4.55
101 281 075	75	38.5	37.5	15	10	33	2	6	21.0	4.66
101 281 080	80	41	40	15	10	36	2	6	22.3	5.27
101 281 090	90	46	45	15	10	39	2	6	25.0	5.64
101 281 096	96	49	48	15	10	42	2	6	26.6	7.05
101 281 100	100	51	50	15	10	44	2	6	27.7	7.35
101 281 120	120	61	60	15	10	54	2	6	33.2	10.20

## SPUR GEARS - ACETAL

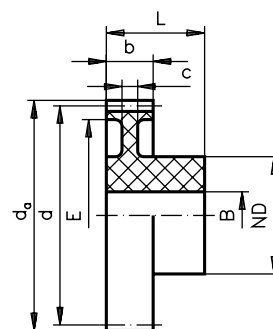
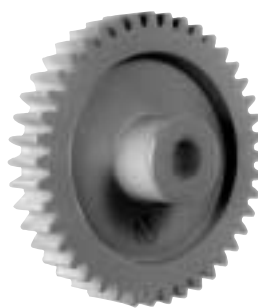
- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal

**Module** : 0.7

**Thickness (b)** : 6mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia ND	O/A Length L	E	c	Bore B	Torque (Ncm)	Weight (g)
101 282 012	12	9.8	8.4	6	15	–	–	3	2.6	0.70
101 282 013	13	10.5	9.1	6	15	–	–	3	3.1	0.80
101 282 014	14	11.2	9.8	6	15	–	–	3	3.6	0.90
101 282 015	15	11.9	10.5	6	15	–	–	3	4.1	1.00
101 282 016	16	12.6	11.2	9	15	–	–	4	4.7	1.30
101 282 017	17	13.3	11.9	9	15	–	–	4	5.3	1.40
101 282 018	18	14	12.6	9	15	–	–	4	5.9	1.60
101 282 019	19	14.7	13.3	9	15	–	–	4	6.6	1.70
101 282 020	20	15.4	14	9	15	–	–	4	7.4	1.80
101 282 021	21	16.1	14.7	9	15	–	–	4	8.1	1.90
101 282 022	22	16.8	15.4	9	15	–	–	4	8.9	2.10
101 282 023	23	17.5	16.1	9	15	–	–	4	9.7	2.20
101 282 024	24	18.2	16.8	9	15	13.5	3	4	10.6	2.10
101 282 025	25	18.9	17.5	9	15	13.5	3	6	11.5	2.20
101 282 026	26	19.6	18.2	9	15	13.5	3	6	12.5	2.40
101 282 027	27	20.3	18.9	9	15	13.5	3	6	13.4	2.60
101 282 028	28	21	19.6	9	15	13.5	3	6	14.5	2.80
101 282 030	30	22.4	21	12	15	16	3	6	16.6	3.50
101 282 032	32	23.8	22.4	12	15	16	3	6	18.9	4.00
101 282 035	35	25.9	24.5	15	15	19	3	6	22.6	5.40
101 282 036	36	26.6	25.2	15	15	19	3	6	23.9	5.60
101 282 038	38	28	26.6	15	15	21.5	3	6	26.7	5.80
101 282 040	40	29.4	28	15	15	21.5	3	6	29.6	6.20
101 282 042	42	30.8	29.4	18	15	24.5	2	6	32.6	7.20
101 282 045	45	32.9	31.5	18	15	24.5	2	6	37.4	8.00
101 282 048	48	35	33.6	18	15	24.5	2	8	42.6	8.60
101 282 050	50	36.4	35	18	15	28	2	8	46.2	8.40
101 282 052	52	37.8	36.4	18	15	28	2	8	50.0	9.00
101 282 054	54	39.2	37.8	18	15	28	2	8	53.9	9.70
101 282 055	55	39.9	38.5	18	15	31	2	8	55.9	9.60
101 282 056	56	40.6	39.2	18	15	31	2	8	58.0	10.00
101 282 060	60	43.4	42	18	15	31	2	8	66.0	11.40
101 282 064	64	46.2	44.8	18	15	37.5	2	8	70.3	10.80
101 282 065	65	46.9	45.5	18	15	37.5	2	8	71.4	11.00
101 282 070	70	50.4	49	18	15	37.5	2	8	76.9	13.40
101 282 072	72	51.8	50.4	18	15	37.5	2	8	79.1	14.40
101 282 075	75	53.9	52.5	18	15	37.5	2	10	82.3	15.60
101 282 080	80	57.4	56	21	15	47	2	10	87.7	15.60
101 282 090	90	64.4	63	21	15	56.5	2	10	98.3	16.40
101 282 096	96	68.6	67.2	21	15	56.5	2	10	100.0	20.00
101 282 100	100	71.4	70	21	15	56.5	2	10	100.0	22.40
101 282 120	120	85.4	84	21	15	77	2	10	130.0	24.80

## SPUR GEARS - ACETAL

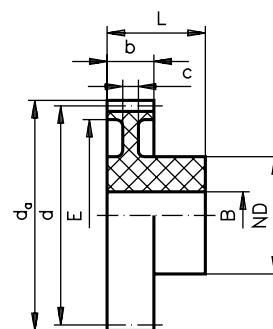
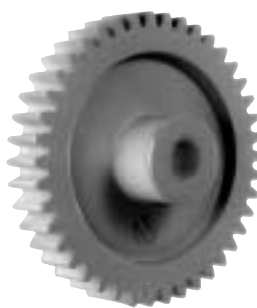
- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal

**Module** : 1.0

**Thickness (b)** : 9mm



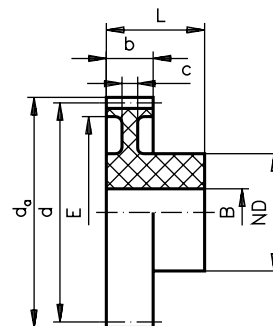
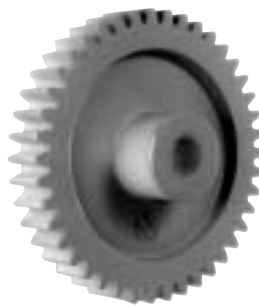
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	O/A Length $L$	E	c	Bore $B$	Torque (Ncm)	Weight (g)
101 283 012	12	14	12	9	17	–	–	4	8.0	1.8
101 283 013	13	15	13	9	17	–	–	4	9.4	1.9
101 283 014	14	16	14	9	17	–	–	4	11.1	2.2
101 283 015	15	17	15	9	17	–	–	4	12.7	2.5
101 283 016	16	18	16	9	17	–	–	4	14.5	2.8
101 283 017	17	19	17	9	17	–	–	4	16.3	3.0
101 283 018	18	20	18	9	17	13.5	6	4	18.3	3.2
101 283 019	19	21	19	9	17	13.5	6	4	20.4	3.5
101 283 020	20	22	20	9	17	13.5	6	4	22.6	3.9
101 283 021	21	23	21	12	17	16	6	5	24.9	4.7
101 283 022	22	24	22	12	17	16	6	5	27.4	5.1
101 283 023	23	25	23	12	17	16	6	5	29.9	5.6
101 283 024	24	26	24	15	18	19	6	6	32.6	6.6
101 283 025	25	27	25	15	18	19	6	6	35.4	7.2
101 283 026	26	28	26	15	18	19	6	6	38.3	7.7
101 283 027	27	29	27	15	18	19	6	6	41.3	8.1
101 283 028	28	30	28	15	18	22	6	6	44.4	8.4
101 283 030	30	32	30	15	18	22	6	6	50.9	9.4
101 283 032	32	34	32	18	18	24.5	4.6	6	58.0	11.3
101 283 035	35	37	35	18	18	24.5	4.6	8	69.4	12.7
101 283 036	36	38	36	18	18	28	4.6	8	73.4	12.6
101 283 038	38	40	38	18	18	28	4.6	8	81.8	14.0
101 283 040	40	42	40	18	18	28	4.6	8	90.6	15.6
101 283 042	42	44	42	18	18	28	4.6	8	99.9	14.0
101 283 045	45	47	45	18	18	37	4.6	8	110	17.0
101 283 048	48	50	48	18	18	37	4.6	8	130	19.8
101 283 050	50	52	50	18	18	37	4.6	8	140	21.6
101 283 052	52	54	52	21	18	47	4.6	8	150	21.4
101 283 054	54	56	54	21	18	47	4.6	8	160	23.5
101 283 055	55	57	55	21	18	47	4.6	8	170	24.7
101 283 056	56	58	56	21	18	47	4.6	8	170	25.9
101 283 058	58	60	58	21	18	47	4.6	8	185	26.8
101 283 060	60	62	60	21	18	47	4.6	8	200	30.5
101 283 064	64	66	64	21	18	57	4.6	10	210	29.8
101 283 065	65	67	65	21	18	57	4.6	10	210	31.0
101 283 070	70	72	70	21	18	57	4.6	10	230	37.7
101 283 072	72	74	72	21	18	67	4.6	10	240	33.8
101 283 075	75	77	75	21	18	67	4.6	10	250	39.1
101 283 080	80	82	80	21	18	67	4.6	10	260	46.5
101 283 085	85	87	85	21	18	77	4.6	10	280	48.7
101 283 090	90	92	90	21	18	77	4.6	10	300	57.5
101 283 100	100	102	100	24	18	87	4.6	12	340	95.1
101 283 110	110	112	110	24	18	97	4.6	12	380	82.5
101 283 120	120	122	120	24	18	107	4.6	12	420	95.2
101 283 130	130	132	130	24	18	115	4.6	12	460	109.3
101 283 140	140	142	140	24	18	125	4.6	12	500	127.1

## SPUR GEARS - ACETAL

- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal  
**Module** : 1.25  
**Thickness (b)** : 10mm



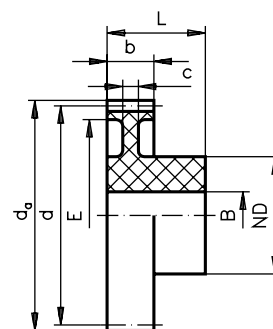
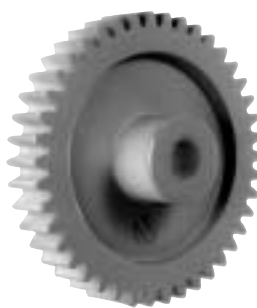
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	O/A Length $L$	E	c	Bore $B$	Torque (Ncm)	Weight (g)
101 284 012	12	17.5	15	9	19	–	–	5	14.1	2.5
101 284 013	13	18.75	16.25	9	19	–	–	5	16.6	3.0
101 284 014	14	20	17.5	9	19	–	–	5	19.2	3.4
101 284 015	15	21.25	18.75	9	19	13.5	7	5	22.1	3.8
101 284 016	16	22.5	20	9	19	13.5	7	5	25.1	4.3
101 284 017	17	23.75	21.25	9	19	13.5	7	5	28.4	4.7
101 284 018	18	25	22.5	12	19	16	7	5	31.8	6.0
101 284 019	19	26.25	23.75	12	19	16	7	5	35.5	6.5
101 284 020	20	27.5	25	12	19	16	7	5	39.3	7.0
101 284 021	21	28.75	26.25	15	19	19	7	6	43.3	8.4
101 284 022	22	30	27.5	15	19	19	7	6	47.6	9.1
101 284 023	23	31.25	28.75	15	19	19	7	6	52.0	9.9
101 284 024	24	32.5	30	15	19	21.5	7	6	56.6	10.3
101 284 025	25	33.75	31.25	15	19	21.5	7	6	61.4	11.2
101 284 026	26	35	32.5	18	19	24	5.5	6	66.4	12.5
101 284 027	27	36.25	33.75	18	19	24	5.5	6	71.7	13.3
101 284 028	28	37.5	35	18	19	24	5.5	8	77.1	13.8
101 284 030	30	40	37.5	18	19	28	5.5	8	88.5	15.0
101 284 032	32	42.5	40	18	19	28	5.5	8	100.0	17.1
101 284 035	35	46.25	43.75	18	19	28	5.5	8	120.0	20.5
101 284 036	36	47.5	45	18	19	37.5	5.5	8	120.0	18.8
101 284 038	38	50	47.5	18	19	37.5	5.5	8	140.0	21.2
101 284 040	40	52.5	50	18	19	37.5	5.5	8	150.0	24.0
101 284 042	42	55	52.5	18	19	37.5	5.5	8	170.0	26.7
101 284 045	45	58.75	56.25	21	19	47.5	5.5	8	190.0	29.4
101 284 048	48	62.5	60	21	19	47.5	5.5	8	220.0	24.0
101 284 050	50	65	62.5	21	19	47.5	5.5	8	240.0	37.1
101 284 052	52	67.5	65	21	19	57	5.5	10	260.0	35.2
101 284 054	54	70	67.5	21	19	57	5.5	10	280.0	38.7
101 284 055	55	71.25	68.75	21	19	57	5.5	10	290.0	40.3
101 284 056	56	72.5	70	21	19	57	5.5	10	300.0	42.4
101 284 060	60	77.5	75	21	19	67	5.5	10	350.0	45.2
101 284 064	64	82.5	80	21	19	67	5.5	10	370.0	52.0
101 284 065	65	83.75	81.25	21	19	67	5.5	10	370.0	55.4
101 284 070	70	90	87.5	21	19	77	5.5	10	400.0	60.5
101 284 075	75	96.25	93.75	21	19	77	5.5	10	430.0	72.5

## SPUR GEARS - ACETAL

- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal  
**Module** : 1.5  
**Thickness (b)** : 12mm



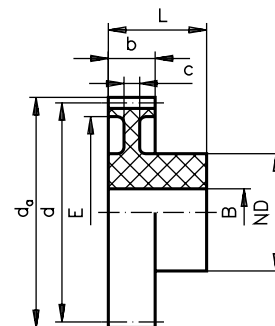
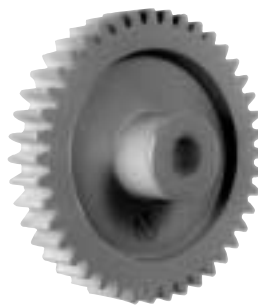
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	O/A Length $L$	E	c	Bore $B$	Torque (Ncm)	Weight (g)
101 285 012	12	21	18	14	23	–	–	6	24.4	5.6
101 285 013	13	22.5	19.5	14	23	–	–	6	28.7	6.3
101 285 014	14	24	21	14	23	–	–	6	33.3	7.1
101 285 015	15	25.5	22.5	14	23	–	–	6	38.2	7.8
101 285 016	16	27	24	14	23	–	–	6	43.5	8.7
101 285 017	17	28.5	25.5	14	23	–	–	6	49.1	9.7
101 285 018	18	30	27	17	23	–	–	8	55.0	10.9
101 285 019	19	31.5	28.5	17	23	–	–	8	61.3	11.9
101 285 020	20	33	30	17	23	–	–	8	67.9	12.9
101 285 021	21	34.5	31.5	17	23	23	5	8	74.9	13.0
101 285 022	22	36	33	17	23	23	5	8	82.2	14.3
101 285 023	23	37.5	34.5	17	23	23	5	8	89.9	15.5
101 285 024	24	39	36	19	23	27	5	8	97.9	16.8
101 285 025	25	40.5	37.5	19	23	27	5	8	100.0	18.3
101 285 026	26	42	39	19	23	27	5	8	110.0	19.9
101 285 027	27	43.5	40.5	19	23	27	5	8	120.0	21.6
101 285 028	28	45	42	19	23	27	5	8	130.0	23.3
101 285 030	30	48	45	24	23	35	5	10	150.0	26.1
101 285 032	32	51	48	24	23	35	5	10	170.0	29.9
101 285 035	35	55.5	52.5	24	23	43	5	10	200.0	31.2
101 285 036	36	57	54	24	23	43	5	10	220.0	33.0
101 285 038	38	60	57	24	23	43	5	10	240.0	37.7
101 285 040	40	63	60	24	23	50	5	10	270.0	37.4
101 285 042	42	66	63	24	23	50	5	10	290.0	42.3
101 285 045	45	70.5	67.5	24	23	50	5	10	340	49.4
101 285 048	48	75	72	24	23	50	5	10	390	57.2
101 285 050	50	78	75	27	23	65	5	12	420	53.1
101 285 052	52	81	78	27	23	65	5	12	450	58.9
101 285 054	54	84	81	27	23	65	5	12	490	64.8
101 285 055	55	85.5	82.5	27	23	65	5	12	510	67.9
101 285 060	60	93	90	27	23	65	5	12	600	83.9
101 285 070	70	108	105	30	23	90	5	14	780	97.7
101 285 080	80	123	120	30	23	106	5	14	960	119.6
101 285 090	90	138	135	30	23	118	5	14	1140	149.8

## SPUR GEARS - ACETAL

- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal  
**Module** : 2.0  
**Thickness (b)** : 15mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	O/A Length $L$	$E$	$c$	Bore $B$	Torque (Ncm)	Weight (g)
101 286 012	12	28	24	18.5	27	–	–	8	54.3	11.6
101 286 013	13	30	26	18.5	27	–	–	8	63.8	12.9
101 286 014	14	32	28	18.5	27	–	–	8	74.0	14.6
101 286 015	15	34	30	18.5	27	–	–	8	84.9	16.4
101 286 016	16	36	32	17.5	27	23	6	8	96.6	16.4
101 286 017	17	38	34	17.5	27	25	6	8	100.0	17.9
101 286 018	18	40	36	17.5	27	26	6	8	120.0	19.3
101 286 019	19	42	38	17.5	27	28	6	8	130.0	21.2
101 286 020	20	44	40	20	27	29	6	10	150.0	24.1
101 286 021	21	46	42	20	27	29	6	10	160.0	26.7
101 286 022	22	48	44	20	27	29	6	10	180.0	29.3
101 286 023	23	50	46	20	27	36	6	10	190.0	32.1
101 286 024	24	52	48	24	27	36	6	10	210.0	38.7
101 286 025	25	54	50	24	27	36	6	10	230.0	38.4
101 286 026	26	56	52	24	27	40	6	10	250.0	38.8
101 286 027	27	58	54	24	27	40	6	10	270.0	42.1
101 286 028	28	60	56	24	27	40	6	10	290.0	42.2
101 286 030	30	64	60	24	27	46	6	10	330.0	50.6
101 286 032	32	68	64	26	27	46	6	10	380.0	58.6
101 286 035	35	74	70	26	27	56	6	12	460.0	60.9
101 286 036	36	76	72	26	27	56	6	12	480.0	65.5
101 286 038	38	80	76	26	27	64	6	12	540.0	63.9
101 286 040	40	84	80	26	27	64	6	12	600.0	77.0
101 286 042	42	88	84	26	27	64	6	12	660.0	87.7
101 286 045	45	94	90	30	27	70	6	14	740	100.6
101 286 048	48	100	96	30	27	76	6	14	830	114.7
101 286 050	50	104	100	30	27	80	6	14	890	116.7
101 286 055	55	114	110	30	27	90	6	14	1030	134.8
101 286 060	60	124	120	30	27	100	6	14	1170	153.8
101 286 070	70	144	140	30	27	110	6	14	1450	195.7



## SPUR GEARS - ACETAL

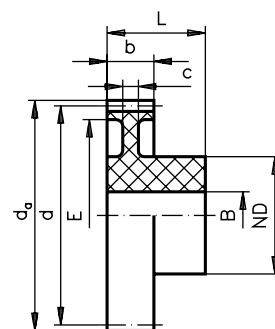
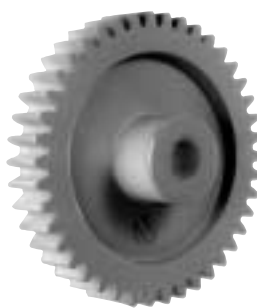
- Injection moulded
- Machined bores
- Pressure angle 20°

High strength and low friction coefficient make these gears a popular choice for many applications, including underwater.

**Material** : Acetal

**Module** : 3.0

**Thickness (b)** : 19mm



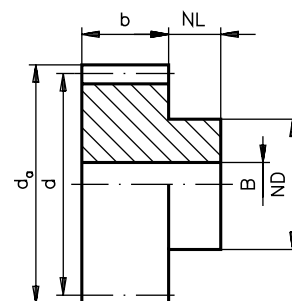
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	O/A Length $L$	$E$	$c$	Bore $B$	Torque (Ncm)	Weight (g)
101 288 012	12	42	36	24	34	–	–	12	150.0	30.2
101 288 013	13	45	39	24	34	–	–	12	180.0	34.6
101 288 014	14	48	42	24	34	–	–	12	210.0	39.1
101 288 015	15	51	45	24	34	30	8	12	240.0	43.1
101 288 016	16	54	48	24	34	30	8	12	270.0	49.1
101 288 017	17	57	51	24	34	30	8	12	310.0	54.5
101 288 018	18	60	54	24	34	38	8	12	340.0	51.7
101 288 019	19	63	57	24	34	38	8	12	380.0	63.7
101 288 020	20	66	60	24	34	38	8	12	430.0	69.7
101 288 021	21	69	63	24	34	45	8	12	470.0	70.2
101 288 022	22	72	66	24	34	45	8	12	520.0	78.8
101 288 023	23	75	69	24	34	52	8	12	560.0	79.4
101 288 024	24	78	72	24	34	52	8	12	620.0	86.9
101 288 025	25	81	75	28	34	58	8	14	670.0	93.2
101 288 026	26	84	78	28	34	58	8	14	720.0	102.2
101 288 027	27	87	81	28	34	58	8	14	780.0	110.9
101 288 028	28	90	84	28	34	68	8	14	840.0	108.6
101 288 030	30	96	90	28	34	68	8	14	960.0	129.8
101 288 032	32	102	96	32	34	71	8	16	1080.0	149.9
101 288 033	33	105	99	32	34	71	8	16	1140.0	161.7
101 288 035	35	111	105	32	34	80	8	16	1260.0	169.8
101 288 038	38	120	114	32	34	89	8	16	1440.0	195.5
101 288 040	40	126	120	32	34	95	8	16	1560.0	208.5
101 288 045	45	141	135	32	34	110	8	16	1860.0	255.0

## SPUR GEARS - DELRIN

- Milled teeth
- Pressure angle 20°

Suitable for running temperatures up to 100°C with intermittent temperature limit of 160°C.  
For full material data see page 84.

Material : Delrin  
Module : 0.5  
Thickness (b) : 4mm



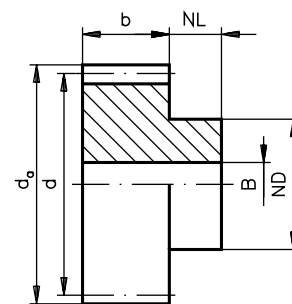
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 291 010	10	6	5	3.5	4	2	0.6	0.12
101 291 012	12	7	6	4	4	2	0.9	0.18
101 291 013	13	7.5	6.5	5	4	2	1.0	0.25
101 291 014	14	8	7	5	4	2	1.2	0.28
101 291 015	15	8.5	7.5	6	4	3	1.4	0.28
101 291 016	16	9	8	6	4	3	1.6	0.34
101 291 017	17	9.5	8.5	6	4	3	1.8	0.36
101 291 018	18	10	9	6	4	3	2.0	0.42
101 291 019	19	10.5	9.5	8	4	3	2.2	0.57
101 291 020	20	11	10	8	4	3	2.5	0.63
101 291 021	21	11.5	10.5	8	4	3	2.7	0.66
101 291 022	22	12	11	8	4	3	3.0	0.71
101 291 023	23	12.5	11.5	8	4	3	3.3	0.80
101 291 024	24	13	12	8	4	3	3.6	0.80
101 291 025	25	13.5	12.5	10	4	3	3.9	0.90
101 291 026	26	14	13	10	4	3	4.2	1.10
101 291 027	27	14.5	13.5	10	4	3	4.5	1.10
101 291 028	28	15	14	10	4	3	4.9	1.20
101 291 030	30	16	15	10	4	3	5.6	1.40
101 291 032	32	17	16	12	4	4	6.4	1.60
101 291 035	35	18.5	17.5	12	4	4	7.7	1.70
101 291 036	36	19	18	12	4	4	8.1	1.80
101 291 038	38	20	19	12	4	4	9.0	2.10
101 291 040	40	21	20	12	4	4	10.0	2.20
101 291 042	42	22	21	12	4	4	11.1	2.40
101 291 045	45	23.5	22.5	12	4	4	12.7	2.70
101 291 048	48	25	24	12	4	4	14.5	3.00
101 291 050	50	26	25	15	4	4	15.7	3.00
101 291 052	52	27	26	15	4	4	17.0	3.80
101 291 054	54	28	27	15	4	4	18.3	4.00
101 291 055	55	28.5	27.5	15	4	4	19.0	4.20
101 291 056	56	29	28	15	4	4	19.7	4.30
101 291 060	60	31	30	15	5	4	22.4	5.00
101 291 064	64	33	32	18	5	5	23.9	6.00
101 291 065	65	33.5	32.5	18	5	5	24.2	6.30
101 291 070	70	36	35	18	5	5	26.1	6.80
101 291 072	72	37	36	18	5	5	26.9	7.10
101 291 075	75	38.5	37.5	18	5	5	28.0	7.70
101 291 080	80	41	40	18	5	5	29.8	8.40
101 291 085	85	43.5	42.5	25	5	5	31.6	11.50
101 291 090	90	46	45	25	5	5	33.4	12.20
101 291 096	96	49	48	25	5	5	35.5	13.00
101 291 100	100	51	50	25	5	5	36.9	14.30
101 291 114	114	58	57	25	5	5	42.1	17.60
101 291 120	120	61	60	25	5	5	44.3	18.60

# SPUR GEARS - DELRIN

- Milled teeth
- Pressure angle 20°

Suitable for running temperatures up to 100°C with intermittent temperature limit of 160°C.  
For full material data see page 84.

Material : Delrin  
Module : 0.7  
Thickness (b) : 5mm



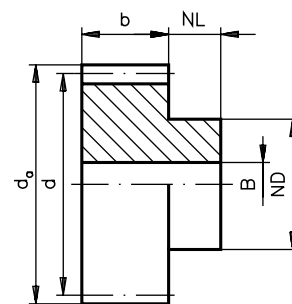
Order Code	N (teeth)	Overall Dia da	Pitch Dia d	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 292 010	10	8.4	7	5	6	2	1.5	0.30
101 292 012	12	9.8	8.4	6	6	2	2.2	0.50
101 292 013	13	10.5	9.1	7	6	2	2.6	0.65
101 292 014	14	11.2	9.8	8	6	2	3.0	0.85
101 292 015	15	11.9	10.5	8	6	3	3.4	0.88
101 292 016	16	12.6	11.2	8	6	3	3.9	0.95
101 292 017	17	13.3	11.9	8	6	3	4.4	1.00
101 292 018	18	14	12.6	10	6	3	4.9	1.40
101 292 019	19	14.7	13.3	10	6	3	5.5	1.40
101 292 020	20	15.4	14	10	6	3	6.1	1.50
101 292 021	21	16.1	14.7	10	6	3	6.8	1.60
101 292 022	22	16.8	15.4	12	6	3	7.4	2.10
101 292 023	23	17.5	16.1	12	6	3	8.1	2.10
101 292 024	24	18.2	16.8	12	6	3	8.8	2.20
101 292 025	25	18.9	17.5	12	6	3	9.6	2.40
101 292 026	26	19.6	18.2	12	6	3	10.4	2.50
101 292 027	27	20.3	18.9	12	6	3	11.2	2.70
101 292 028	28	21	19.6	12	6	3	12.0	2.80
101 292 030	30	22.4	21	15	6	3	13.8	3.60
101 292 032	32	23.8	22.4	15	6	4	15.7	4.10
101 292 035	35	25.9	24.5	15	6	4	18.8	4.50
101 292 036	36	26.6	25.2	15	6	4	19.9	4.70
101 292 038	38	28	26.6	15	6	4	22.2	5.20
101 292 040	40	29.4	28	15	6	4	24.6	5.50
101 292 042	42	30.8	29.4	20	6	4	27.2	7.10
101 292 045	45	32.9	31.5	20	6	4	31.2	7.80
101 292 048	48	35	33.6	20	6	4	35.5	8.20
101 292 050	50	36.4	35	20	6	4	38.5	9.00
101 292 052	52	37.8	36.4	20	6	4	41.7	9.60
101 292 054	54	39.2	37.8	20	6	4	44.9	9.00
101 292 055	55	39.9	38.5	20	6	4	46.6	8.50
101 292 056	56	40.6	39.2	20	6	4	48.3	10.60
101 292 060	60	43.4	42	20	8	4	55.0	12.70
101 292 064	64	46.2	44.8	20	8	5	58.6	14.40
101 292 065	65	46.9	45.5	20	8	5	59.5	14.60
101 292 070	70	50.4	49	20	8	5	64.1	16.30
101 292 072	72	51.8	50.4	20	8	5	65.9	17.00
101 292 075	75	53.9	52.5	20	8	5	68.6	18.10
101 292 080	80	57.4	56	20	8	5	73.1	20.10
101 292 085	85	60.9	59.5	20	8	5	77.4	22.20
101 292 090	90	64.4	63	20	8	5	81.9	24.70
101 292 096	96	68.6	67.2	25	8	5	87.1	29.20
101 292 100	100	71.4	70	25	8	5	90.5	30.50
101 292 114	114	81.2	79.8	25	8	5	100.0	39.80
101 292 120	120	85.4	84	25	8	5	100.0	43.20

## SPUR GEARS - DELRIN

- Milled teeth
- Pressure angle 20°

Suitable for running temperatures up to 100°C with intermittent temperature limit of 160°C.  
For full material data see page 84.

Material : Delrin  
Module : 1.0  
Thickness (b) : 10mm



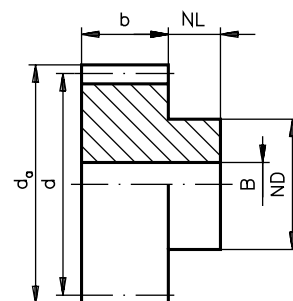
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 293 010	10	12	10	8	6	5	6.2	1.0
101 293 011	11	13	11	8	6	5	7.6	1.2
101 293 012	12	14	12	10	6	5	9.0	1.7
101 293 013	13	15	13	10	6	5	10.6	2.0
101 293 014	14	16	14	10	6	5	12.3	2.3
101 293 015	15	17	15	12	6	5	14.1	2.8
101 293 016	16	18	16	12	6	5	16.1	3.2
101 293 017	17	19	17	12	6	5	18.1	3.5
101 293 018	18	20	18	12	6	5	20.3	4.0
101 293 019	19	21	19	15	6	5	22.7	4.9
101 293 020	20	22	20	15	8	5	25.1	5.8
101 293 021	21	23	21	15	8	5	27.7	6.2
101 293 022	22	24	22	15	8	5	30.4	6.5
101 293 023	23	25	23	15	8	5	33.3	7.1
101 293 024	24	26	24	15	8	5	36.2	7.6
101 293 025	25	27	25	15	8	5	39.3	8.2
101 293 026	26	28	26	15	8	5	42.5	8.7
101 293 027	27	29	27	15	8	5	45.8	9.3
101 293 028	28	30	28	15	8	5	49.3	9.9
101 293 030	30	32	30	15	8	5	56.6	11.2
101 293 032	32	34	32	18	8	6	64.4	13.2
101 293 035	35	37	35	18	8	6	77.1	15.4
101 293 036	36	38	36	18	8	6	81.5	16.1
101 293 038	38	40	38	18	8	6	90.9	17.9
101 293 040	40	42	40	18	8	6	100.0	19.6
101 293 042	42	44	42	18	8	6	110.0	21.5
101 293 045	45	47	45	18	8	6	120.0	24.0
101 293 048	48	50	48	20	8	6	140.0	27.8
101 293 050	50	52	50	20	8	6	150.0	30.0
101 293 052	52	54	52	20	8	6	170.0	32.4
101 293 054	54	56	54	20	8	6	180.0	34.6
101 293 055	55	57	55	20	8	6	190.0	35.6
101 293 056	56	58	56	20	8	6	190.0	36.9
101 293 060	60	62	60	25	8	6	220.0	44.1
101 293 064	64	66	64	25	10	6	230.0	51.1
101 293 065	65	67	65	25	10	6	240.0	52.7
101 293 070	70	72	70	25	10	6	260.0	59.6
101 293 072	72	74	72	30	10	6	260.0	65.5
101 293 075	75	77	75	30	10	6	280.0	71.1
101 293 080	80	82	80	50	10	10	290.0	94.7
101 293 085	85	87	85	50	10	10	310.0	104.1
101 293 090	90	92	90	50	10	10	330.0	113.1
101 293 096	96	98	96	50	10	10	350.0	126.1
101 293 100	100	102	100	50	10	10	360.0	135.0
101 293 120	120	122	120	50	10	10	440.0	182.6

## SPUR GEARS - DELRIN

- Milled teeth
- Pressure angle 20°

Suitable for running temperatures up to 100°C with intermittent temperature limit of 160°C.  
For full material data see page 84.

**Material** : Delrin  
**Module** : 1.25  
**Thickness (b)** : 10mm



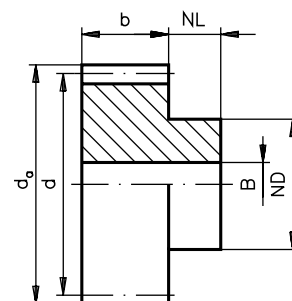
Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 294 010	10	15	12.5	10	8	5	9.8	2.1
101 294 012	12	17.5	15	10	10	5	14.1	3.0
101 294 014	14	20	17.5	12	10	5	19.2	4.3
101 294 015	15	21.25	18.75	15	10	8	22.1	4.7
101 294 018	18	25	22.5	15	10	8	31.8	6.4
101 294 020	20	27.5	25	15	10	8	39.3	7.8
101 294 024	24	32.5	30	20	10	8	56.6	12.7
101 294 025	25	33.75	31.25	20	10	8	61.4	13.3
101 294 030	30	40	37.5	20	10	8	88.5	18.4
101 294 032	32	42.5	40	20	10	8	100.0	20.4
101 294 035	35	46.25	43.75	20	10	8	120.0	23.8
101 294 036	36	47.5	45	20	10	8	120.0	24.9
101 294 038	38	50	47.5	20	10	8	140.0	27.7
101 294 040	40	52.5	50	20	10	8	150.0	30.2
101 294 050	50	65	62.5	20	10	8	240.0	45.6

## SPUR GEARS - DELRIN

- Milled teeth
- Pressure angle 20°

Suitable for running temperatures up to 100°C with intermittent temperature limit of 160°C.  
For full material data see page 84.

Material : Delrin  
Module : 1.5  
Thickness (b) : 15mm

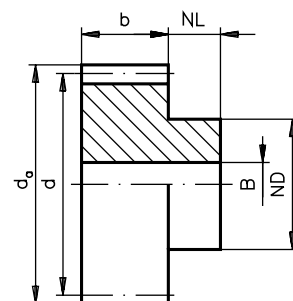


Order Code	N (teeth)	Overall Dia da	Pitch Dia d	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 295 010	10	18	15	12	10	6	21.2	4.0
101 295 012	12	21	18	18	10	8	30.5	6.6
101 295 013	13	22.5	19.5	18	10	8	35.9	7.6
101 295 014	14	24	21	18	10	8	41.6	8.6
101 295 015	15	25.5	22.5	18	10	8	47.8	9.7
101 295 016	16	27	24	20	10	10	54.3	10.7
101 295 018	18	30	27	20	10	10	68.8	13.4
101 295 020	20	33	30	25	10	10	84.9	18.5
101 295 022	22	36	33	25	10	10	100.0	21.6
101 295 024	24	39	36	25	10	10	120.0	25.0
101 295 025	25	40.5	37.5	25	10	10	130.0	26.7
101 295 028	28	45	42	25	10	10	160.0	32.7
101 295 030	30	48	45	30	10	10	190.0	40.1
101 295 032	32	51	48	30	10	10	210.0	44.5
101 295 035	35	55.5	52.5	30	10	10	260.0	51.9
101 295 036	36	57	54	30	10	10	270.0	54.5
101 295 038	38	60	57	30	10	10	300.0	59.7
101 295 040	40	63	60	30	10	10	330.0	65.8
101 295 042	42	66	63	35	10	10	370.0	75.4
101 295 045	45	70.5	67.5	35	10	10	430.0	85.4
101 295 048	48	75	72	35	10	10	480.0	96.1
101 295 050	50	78	75	35	10	10	530.0	102.3
101 295 055	55	85.5	82.5	35	10	10	640.0	122.0
101 295 060	60	93	90	40	10	10	750.0	147.4
101 295 065	65	100.5	97.5	40	10	10	820.0	171.0
101 295 070	70	108	105	40	10	10	880.0	195.1
101 295 080	80	123	120	50	10	10	1000.0	265.1
101 295 090	90	138	135	50	10	10	1120.0	321.5
101 295 100	100	153	150	50	10	10	1240.0	393.2
101 295 120	120	183	180	70	10	15	1490.0	588.3

# SPUR GEARS - DELRIN

- Milled teeth
- Pressure angle 20°

Suitable for running temperatures up to 100°C with intermittent temperature limit of 160°C.  
For full material data see page 84.



Material : Delrin, Module : 2.0, Thickness (b) : 16mm

Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Ncm)	Weight (g)
101 296 010	10	24	20	15	15	8	40.2	8.0
101 296 012	12	28	24	20	15	8	58.0	13.9
101 296 015	15	34	30	20	15	12	90.6	17.0
101 296 018	18	40	36	30	15	12	130.0	32.0
101 296 020	20	44	40	30	15	12	160.0	37.3
101 296 024	24	52	48	30	15	12	230.0	50.0
101 296 025	25	54	50	30	15	12	250.0	53.6
101 296 030	30	64	60	30	15	12	360.0	72.7
101 296 040	40	84	80	50	15	12	640.0	149.0
101 296 045	45	94	90	50	15	12	810.0	177.0
101 296 050	50	104	100	60	15	12	1000.0	231.0
101 296 060	60	124	120	60	15	12	1430.0	307.0

Material : Delrin, Module : 2.5, Thickness (b) : 20mm

Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Ncm)	Weight (g)
101 297 010	10	30	25	20	15	10	78.6	15.6
101 297 012	12	35	30	20	15	10	110.0	21.7
101 297 015	15	42.5	37.5	25	15	12	170.0	35.0
101 297 018	18	50	45	30	15	12	250.0	53.0
101 297 020	20	55	50	30	15	12	310.0	63.0
101 297 024	24	65	60	30	15	12	450.0	87.0
101 297 025	25	67.5	62.5	40	15	12	490.0	105.0
101 297 030	30	80	75	40	15	12	700.0	143.0
101 297 040	40	105	100	50	20	15	1250.0	264.0
101 297 045	45	117.5	112.5	50	20	15	1590.0	322.0
101 297 050	50	130	125	70	20	15	1960.0	443.0
101 297 060	60	155	150	70	20	20	2810.0	585.0

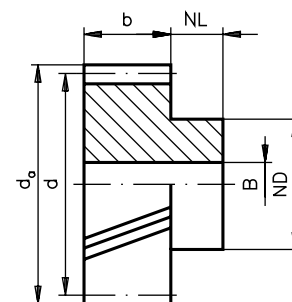
Material : Delrin, Module : 3.0, Thickness (b) : 25mm

Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Ncm)	Weight (g)
101 298 010	10	36	30	25	15	12	140.0	27
101 298 012	12	28	24	25	15	12	200.0	38
101 298 015	15	34	30	25	15	12	310.0	58
101 298 018	18	40	36	30	15	12	450.0	87
101 298 020	20	44	40	30	15	12	560.0	106
101 298 024	24	52	48	30	15	12	810.0	149
101 298 025	25	54	50	45	15	15	880.0	179
101 298 028	28	60	56	45	15	15	1100.0	217
101 298 030	30	64	60	45	15	15	1270.0	244
101 298 035	35	74	70	45	15	15	1730.0	325
101 298 040	40	84	80	50	15	15	2260.0	424
101 298 045	45	94	90	50	15	20	2860.0	521
101 298 048	48	100	96	50	15	20	3260.0	603
101 298 050	50	104	100	70	20	20	3540.0	708
101 298 060	60	124	120	70	20	20	5050.0	987

# SPUR GEARS

- 20° Helical interlocking left & right hand
- Bores tolerances to H7
- Pressure angle 20°

For each module series helical spur gears are always selected in left/right handed pairs.



## Material : Brass MS 58, Module : 0.3, Thickness (b) : 5mm

Left Hand Order Code	Right Hand Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 269 012	101 269 512	12	4.4	3.83	3	4	2	0.76	0.5
101 269 015	101 269 515	15	5.4	4.79	4	4	2.5	1.22	0.7
101 269 018	101 269 518	18	6.4	5.75	5	4	3	1.83	1.2
101 269 020	101 269 520	20	7.0	6.39	6	4	3.5	2.31	1.4
101 269 024	101 269 524	24	8.3	7.66	7	4	4.5	3.41	1.9
101 269 030	101 269 530	30	10.2	9.58	9	5	5	5.46	4.0

## Material : Brass MS 58, Module : 0.5, Thickness (b) : 10mm

Left Hand Order Code	Right Hand Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 269 218	101 269 718	18	10.6	9.58	8	6	4	10.16	6.7
101 269 222	101 269 722	22	12.7	11.71	10	6	6	15.91	9.6
101 269 225	101 269 725	25	14.3	13.3	12	6	6	20.55	17.6
101 269 230	101 269 730	30	17.0	15.96	14	6	8	29.60	24.3
101 269 234	101 269 734	34	19.1	18.09	16	6	8	38.95	27.0
101 269 240	101 269 740	40	22.3	21.28	18	8	8	55.25	38.0

## Material : Steel 9 SMn 28K, Module : 1.0, Thickness (b) : 10mm

Left Hand Order Code	Right Hand Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 214 210	101 214 310	10	12.6	10.64	8	6	4	12.35	7.3
101 214 215	101 214 315	15	18.0	15.96	12	6	5	29.92	17.9
101 214 218	101 214 318	18	21.2	19.16	12	6	5	43.09	24.4
101 214 220	101 214 320	20	23.3	21.28	15	6	5	54.55	32.5
101 214 224	101 214 324	24	27.5	25.54	15	6	5	78.55	44.4
101 214 225	101 214 325	25	28.6	26.60	15	6	5	85.23	47.8
101 214 230	101 214 330	30	33.9	31.93	15	6	5	130	66.9
101 214 236	101 214 336	36	40.3	38.31	18	6	6	190	96.9
101 214 240	101 214 340	40	44.6	42.57	18	6	6	238	118.3
101 214 250	101 214 350	50	55.2	53.21	18	8	6	373	184.4



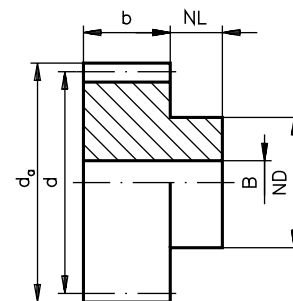
## SPUR GEARS - BRASS

- Quality grade 8d (DIN 58405)
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

Material : Brass MS 58

Module : 0.3

Thickness (b) : 2mm



Order Code	N (teeth)	Overall Dia $d_o$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Ncm)	Weight (g)
101 260 010	10	3.6	3	3.6	3	1.0	0.11	0.1
101 260 012	12	4.2	3.6	4.2	3	1.5	0.17	0.2
101 260 014	14	4.8	4.2	4.8	3	2.0	0.23	0.4
101 260 015	15	5.1	4.5	5.1	3	2.0	0.26	0.5
101 260 016	16	5.4	4.8	5.4	3	2.0	0.3	0.6
101 260 018	18	6	5.4	6	3	2.0	0.38	0.8
101 260 020	20	6.6	6	6.6	3	2.0	0.47	1
101 260 022	22	7.2	6.6	7.2	3	2.0	0.57	1.3
101 260 024	24	7.8	7.2	7.8	3	2.0	0.7	1.4
101 260 025	25	8.1	7.5	8.1	3	2.0	0.7	1.6
101 260 030	30	9.6	9	9.6	3	2.0	1.1	2.3
101 260 040	40	12.6	12	10	3	3.0	1.9	3.5
101 260 050	50	15.6	15	10	5	3.0	3.0	5.7
101 260 060	60	18.6	18	10	5	3.0	4.3	6.9
101 260 080	80	24.6	24	15	5	3.0	7.6	14.7
101 260 100	100	30.6	30	15	5	3.0	11.9	18.5
101 260 120	120	36.6	36	15	5	3.0	15.65	23.7

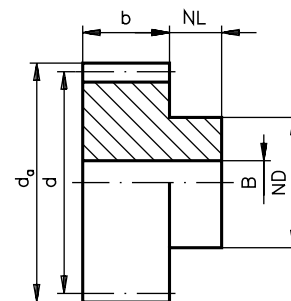
## SPUR GEARS - BRASS

- Quality grade 8d (DIN 58405)
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

Material : Brass MS 58

Module : 0.5

Thickness (b) : 2mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Ncm)	Weight (g)
101 261 010	10	6	5	4	4	2	0.3	0.5
101 261 012	12	7	6	4	4	2	0.4	0.7
101 261 013	13	7.5	6.5	5	4	2	0.5	1.0
101 261 014	14	8	7	5	4	2	0.6	1.1
101 261 015	15	8.5	7.5	6	4	2	0.7	1.4
101 261 016	16	9	8	6	4	2	0.8	1.5
101 261 017	17	9.5	8.5	7	4	2	0.9	2.0
101 261 018	18	10	9	7	4	2	1.0	2.2
101 261 019	19	10.5	9.5	8	4	2	1.1	2.8
101 261 020	20	11	10	8	4	2	1.3	2.8
101 261 021	21	11.5	10.5	8	4	2	1.4	2.7
101 261 022	22	12	11	8	4	2	1.5	3.1
101 261 023	23	12.5	11.5	10	4	2	1.7	4.1
101 261 024	24	13	12	10	4	2	1.9	4.3
101 261 025	25	13.5	12.5	10	4	2	2.0	4.6
101 261 026	26	14	13	10	4	3	2.2	4.4
101 261 027	27	14.5	13.5	10	4	3	2.4	4.5
101 261 028	28	15	14	10	4	3	2.5	4.8
101 261 030	30	16	15	10	4	3	2.9	5.2
101 261 032	32	17	16	10	4	3	3.3	5.6
101 261 035	35	18.5	17.5	12	4	3	4.0	7.3
101 261 036	36	19	18	12	4	3	4.2	7.7
101 261 038	38	20	19	12	4	3	4.7	8.0
101 261 040	40	21	20	12	4	3	5.2	8.6
101 261 042	42	22	21	12	4	3	5.8	8.9
101 261 045	45	23.5	22.5	12	4	3	6.6	9.9
101 261 048	48	25	24	12	4	3	7.6	10.7
101 261 050	50	26	25	12	4	3	8.2	11.4
101 261 052	52	27	26	12	4	3	8.9	12.1
101 261 054	54	28	27	12	4	3	9.6	13.0
101 261 055	55	28.5	27.5	12	4	3	9.9	13.2
101 261 056	56	29	28	12	4	3	10.3	13.7
101 261 060	60	31	30	12	4	3	11.9	15.4
101 261 064	64	33	32	15	4	3	13.5	18.7
101 261 065	65	33.5	32.5	15	4	3	13.9	19.0
101 261 070	70	36	35	15	4	3	16.1	21.3
101 261 072	72	37	36	15	4	3	17.1	22.4
101 261 075	75	38.5	37.5	15	4	3	18.5	23.7
101 261 080	80	41	40	15	4	3	21.1	26.2
101 261 085	85	43.5	42.5	15	4	3	23.8	29.1
101 261 090	90	46	45	15	4	3	26.7	32.3
101 261 096	96	49	48	15	4	3	30.4	36.1
101 261 100	100	51	50	15	4	3	33.0	39.4
101 261 114	114	58	57	15	4	3	41.2	47.5
101 261 120	120	61	60	25	4	3	43.4	62.8

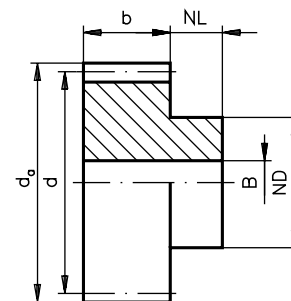
## SPUR GEARS - BRASS

- Quality grade 8 d (DIN 58405)
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

Material : Brass MS 58

Module : 0.7

Thickness (b) : 4mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 262 010	10	8.4	7	5	6	3	1.2	1.6
101 262 012	12	9.8	8.4	8	6	3	1.8	3.3
101 262 013	13	10.5	9.1	8	6	3	2.1	4.0
101 262 014	14	11.2	9.8	8	6	3	2.5	4.4
101 262 015	15	11.9	10.5	8	6	3	2.9	4.8
101 262 016	16	12.6	11.2	9	6	3	3.3	5.8
101 262 017	17	13.3	11.9	10	6	3	3.7	7.0
101 262 018	18	14	12.6	10	6	4	4.1	6.9
101 262 019	19	14.7	13.3	10	6	4	4.6	7.4
101 262 020	20	15.4	14	10	6	4	5.1	7.9
101 262 021	21	16.1	14.7	12	6	4	5.7	10.2
101 262 022	22	16.8	15.4	12	6	4	6.2	10.7
101 262 023	23	17.5	16.1	12	6	4	6.8	11.2
101 262 024	24	18.2	16.8	12	6	4	7.4	12.0
101 262 025	25	18.9	17.5	12	6	4	8.0	12.6
101 262 026	26	19.6	18.2	12	6	4	8.7	13.2
101 262 027	27	20.3	18.9	12	6	4	9.4	13.9
101 262 028	28	21	19.6	12	6	4	10.1	14.7
101 262 030	30	22.4	21	12	6	4	11.6	16.1
101 262 032	32	23.8	22.4	12	6	4	13.2	17.7
101 262 035	35	25.9	24.5	12	6	4	15.8	20.0
101 262 036	36	26.6	25.2	12	6	4	16.7	21.5
101 262 038	38	28	26.6	12	6	4	18.7	22.9
101 262 040	40	29.4	28	12	6	5	20.7	24.3
101 262 042	42	30.8	29.4	12	6	5	22.8	26.6
101 262 045	45	32.9	31.5	12	6	5	26.2	29.8
101 262 048	48	35	33.6	15	6	5	29.8	36.5
101 262 050	50	36.4	35	15	6	5	32.3	39.1
101 262 052	52	37.8	36.4	15	6	5	35.0	41.1
101 262 054	54	39.2	37.8	15	6	5	37.7	44.4
101 262 055	55	39.9	38.5	15	6	5	39.1	45.8
101 262 056	56	40.6	39.2	15	6	5	40.6	47.4
101 262 060	60	43.4	42	15	8	5	46.6	56.0
101 262 064	64	46.2	44.8	15	8	5	53.0	62.2
101 262 065	65	46.9	45.5	15	8	5	54.7	63.7
101 262 070	70	50.4	49	18	8	5	63.4	77.8
101 262 072	72	51.8	50.4	18	8	5	67.1	80.8
101 262 075	75	53.9	52.5	18	8	5	72.8	87.6
101 262 080	80	57.4	56	18	8	5	82.9	97.7
101 262 085	85	60.9	59.5	20	8	6	93.6	109.7
101 262 090	90	64.4	63	20	8	6	100.0	119.9
101 262 096	96	68.6	67.2	25	8	6	110.0	149.6
101 262 100	100	71.4	70	25	8	6	120.0	157.2
101 262 114	114	81.2	79.8	25	8	6	160.0	192.0
101 262 120	120	85.4	84	25	8	6	170.0	216.7

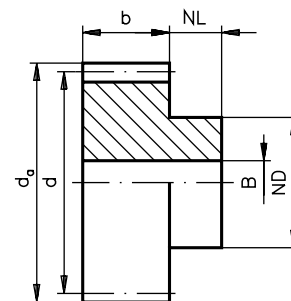
## SPUR GEARS - BRASS

- Quality grade 8 d (DIN 58405)
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

Material : Brass MS 58

Module : 1.0

Thickness (b) : 6.5mm



Order Code	N (teeth)	Overall Dia da	Pitch Dia d	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 263 010	10	12	10	8	6	4	4.2	5.1
101 263 012	12	14	12	10	6	4	6.1	8.4
101 263 013	13	15	13	10	6	5	7.2	8.7
101 263 014	14	16	14	10	6	5	8.4	9.9
101 263 015	15	17	15	12	6	5	9.6	12.9
101 263 016	16	18	16	12	6	5	11.0	14.2
101 263 017	17	19	17	12	6	5	12.4	15.7
101 263 018	18	20	18	12	6	5	13.9	17.1
101 263 019	19	21	19	15	6	5	15.5	21.8
101 263 020	20	22	20	15	6	5	17.1	23.3
101 263 021	21	23	21	15	6	5	18.9	27.0
101 263 022	22	24	22	15	6	5	20.7	27.1
101 263 023	23	25	23	15	6	5	22.7	28.8
101 263 024	24	26	24	15	6	5	24.7	31.2
101 263 025	25	27	25	15	6	5	26.8	33.1
101 263 026	26	28	26	15	6	5	29.0	35.1
101 263 027	27	29	27	15	6	5	34.3	37.5
101 263 028	28	30	28	15	6	5	33.6	39.9
101 263 030	30	32	30	15	6	5	38.6	44.7
101 263 032	32	34	32	15	6	5	44.0	50.6
101 263 035	35	37	35	15	6	5	52.6	58.9
101 263 036	36	38	36	15	6	5	55.6	61.3
101 263 038	38	40	38	18	6	5	62.0	72.0
101 263 040	40	42	40	18	6	6	68.7	77.5
101 263 042	42	44	42	18	6	6	75.8	84.7
101 263 045	45	47	45	18	8	6	87.0	99.4
101 263 048	48	50	48	18	8	6	99.0	110.4
101 263 050	50	52	50	18	8	6	100.0	119.8
101 263 052	52	54	52	18	8	6	110.0	127.8
101 263 054	54	56	54	18	8	6	120.0	138.3
101 263 055	55	57	55	18	8	6	120.0	141.8
101 263 056	56	58	56	18	8	6	130.0	146.9
101 263 060	60	62	60	18	8	6	150.0	166.6
101 263 064	64	66	64	18	8	6	170.0	187.2
101 263 065	65	67	65	18	8	6	180.0	195.0
101 263 070	70	72	70	20	8	6	210.0	229.2
101 263 072	72	74	72	20	10	6	220.0	241.9
101 263 075	75	77	75	40	10	8	240.0	335.9
101 263 080	80	82	80	40	10	8	270.0	367.5
101 263 085	85	87	85	40	12	8	310.0	423.6
101 263 090	90	92	90	40	12	8	340.0	466.8
101 263 096	96	98	96	40	12	8	390.0	505.6
101 263 100	100	102	100	50	12	10	420.0	609.9
101 263 120	120	122	120	50	12	10	560.0	806.5

## SPUR GEARS - STEEL

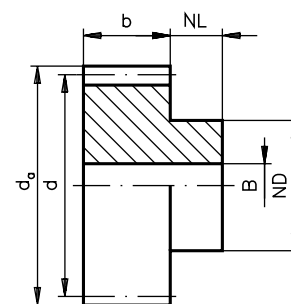
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel 9 SMn 28K

**Module** : 0.5

**Thickness (b)** : 4mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 211 010	10	6	5	4	4	2	0.7	0.8
101 211 012	12	7	6	4	4	2	1.1	1
101 211 013	13	7.5	6.5	5	4	2	1.3	1
101 211 014	14	8	7	5	4	2	1.5	2
101 211 015	15	8.5	7.5	6	4	3	1.7	2
101 211 016	16	9	8	6	4	3	2.0	2
101 211 017	17	9.5	8.5	6	4	3	2.2	2
101 211 018	18	10	9	6	4	3	2.5	2
101 211 019	19	10.5	9.5	8	4	3	2.8	3
101 211 020	20	11	10	8	4	3	3.1	3
101 211 021	21	11.5	10.5	8	4	3	3.4	4
101 211 022	22	12	11	8	4	3	3.8	4
101 211 023	23	12.5	11.5	8	4	3	4.1	4
101 211 024	24	13	12	8	4	3	4.5	4
101 211 025	25	13.5	12.5	10	4	4	4.9	5
101 211 026	26	14	13	10	4	4	5.3	5
101 211 027	27	14.5	13.5	10	4	4	5.7	5
101 211 028	28	15	14	10	4	4	6.1	6
101 211 030	30	16	15	10	4	4	7.0	7
101 211 032	32	17	16	12	4	4	8.0	9
101 211 035	35	18.5	17.5	12	4	4	9.6	10
101 211 036	36	19	18	12	4	4	10.1	10
101 211 038	38	20	19	12	4	4	11.3	11
101 211 040	40	21	20	12	4	4	12.5	12
101 211 042	42	22	21	15	4	5	13.8	14
101 211 045	45	23.5	22.5	15	4	5	15.9	16
101 211 048	48	25	24	15	4	5	18.1	18
101 211 050	50	26	25	15	4	5	19.6	19
101 211 052	52	27	26	15	4	5	21.2	20
101 211 054	54	28	27	15	4	5	22.9	22
101 211 055	55	28.5	27.5	15	4	5	23.7	23
101 211 056	56	29	28	15	4	5	24.6	23
101 211 060	60	31	30	20	4	5	28.2	30
101 211 064	64	33	32	20	4	5	32.1	33
101 211 065	65	33.5	32.5	20	4	5	33.1	33
101 211 070	70	36	35	20	4	5	38.4	39
101 211 072	72	37	36	20	4	5	40.7	40
101 211 075	75	38.5	37.5	20	4	5	44.1	42
101 211 080	80	41	40	20	4	5	50.2	47
101 211 085	85	43.5	42.5	25	4	6	56.7	57
101 211 090	90	46	45	25	4	6	63.6	62
101 211 096	96	49	48	25	4	6	72.4	69
101 211 100	100	51	50	25	4	6	78.5	74
101 211 114	114	58	57	25	4	6	100.0	94
101 211 120	120	61	60	25	4	6	110.0	100

## SPUR GEARS - STEEL

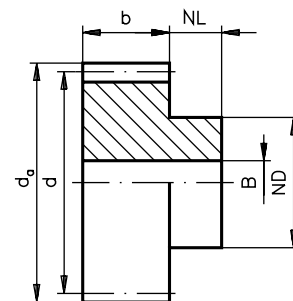
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel 9 SMn 28K

**Module** : 0.7

**Thickness (b)** : 5mm



Order Code	N (teeth)	Overall Dia da	Pitch Dia d	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 212 010	10	8.4	7	5	6	3	1.9	2
101 212 012	12	9.8	8.4	8	6	3	2.7	3
101 212 013	13	10.5	9.1	8	6	3	3.2	4
101 212 014	14	11.2	9.8	8	6	3	3.7	5
101 212 015	15	11.9	10.5	8	6	3	4.3	5
101 212 016	16	12.6	11.2	10	6	4	4.9	6
101 212 017	17	13.3	11.9	10	6	4	5.5	6
101 212 018	18	14	12.6	10	6	4	6.2	7
101 212 019	19	14.7	13.3	10	6	4	6.9	8
101 212 020	20	15.4	14	10	6	4	7.6	8
101 212 021	21	16.1	14.7	12	6	4	8.4	10
101 212 022	22	16.8	15.4	12	6	4	9.3	11
101 212 023	23	17.5	16.1	12	6	4	10.1	12
101 212 024	24	18.2	16.8	12	6	4	11	13
101 212 025	25	18.9	17.5	15	6	4	12	16
101 212 026	26	19.6	18.2	15	6	5	13	16
101 212 027	27	20.3	18.9	15	6	5	14	17
101 212 028	28	21	19.6	15	6	5	15	18
101 212 030	30	22.4	21	15	6	5	17.3	20
101 212 032	32	23.8	22.4	15	6	5	19.7	21
101 212 035	35	25.9	24.5	15	6	5	23.5	24
101 212 036	36	26.6	25.2	15	6	5	24.9	26
101 212 038	38	28	26.6	18	6	5	27.7	31
101 212 040	40	29.4	28	18	6	5	30.7	33
101 212 042	42	30.8	29.4	18	6	6	33.9	35
101 212 045	45	32.9	31.5	18	6	6	38.9	39
101 212 048	48	35	33.6	18	6	6	44.3	43
101 212 050	50	36.4	35	18	6	6	48.1	46
101 212 052	52	37.8	36.4	18	6	6	52	49
101 212 054	54	39.2	37.8	18	6	6	56.1	53
101 212 055	55	39.9	38.5	18	6	6	58.2	53
101 212 056	56	40.6	39.2	18	6	6	60.3	56
101 212 060	60	43.4	42	18	6	6	69.2	63
101 212 064	64	46.2	44.8	18	6	6	78.8	70
101 212 065	65	46.9	45.5	18	6	6	81.3	72
101 212 070	70	50.4	49	18	6	6	94.3	83
101 212 072	72	51.8	50.4	20	6	6	99.7	89
101 212 075	75	53.9	52.5	20	6	6	100	97
101 212 080	80	57.4	56	20	6	6	120	108
101 212 085	85	60.9	59.5	20	6	6	130	121
101 212 090	90	64.4	63	20	6	6	150	133
101 212 096	96	68.6	67.2	25	6	8	170	157
101 212 100	100	71.4	70	25	6	8	190	168
101 212 114	114	81.2	79.8	25	6	8	250	217
101 212 120	120	85.4	84	25	6	8	270	239

## SPUR GEARS - STEEL

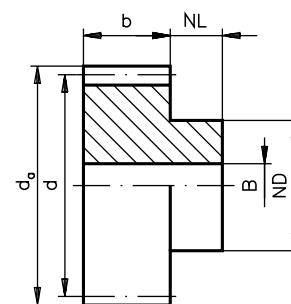
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.0

**Thickness (b)** : 6.5mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 213 010	10	12	10	8	6	4	5.1	5
101 213 012	12	14	12	10	6	4	7.3	8
101 213 014	14	16	14	10	6	5	10	9
101 213 015	15	17	15	12	6	5	11.4	10
101 213 016	16	18	16	12	6	5	13.5	13
101 213 017	17	19	17	15	6	5	14.7	14
101 213 018	18	20	18	15	6	5	16.5	19
101 213 020	20	22	20	15	6	5	20.4	22
101 213 022	22	24	22	15	6	5	24.7	25
101 213 024	24	26	24	15	6	5	29.4	28
101 213 025	25	27	25	15	6	5	31.9	30
101 213 028	28	30	28	15	6	5	40	37
101 213 030	30	32	30	15	6	5	45.9	41
101 213 032	32	34	32	15	6	5	52.2	46
101 213 035	35	37	35	15	6	5	62.5	54
101 213 036	36	38	36	15	6	5	66.1	57
101 213 040	40	42	40	18	6	6	81.7	71
101 213 042	42	44	42	18	6	6	90	78
101 213 045	45	47	45	18	6	6	100	88
101 213 048	48	50	48	18	8	6	110	103
101 213 050	50	52	50	18	8	6	120	111
101 213 054	54	56	54	18	8	6	140	127
101 213 060	60	62	60	18	8	6	180	155
101 213 064	64	66	64	18	8	6	200	174
101 213 065	65	67	65	18	8	8	210	175
101 213 070	70	72	70	25	8	8	250	219
101 213 072	72	74	72	25	10	8	260	236
101 213 075	75	77	75	40	10	8	280	313
101 213 080	80	82	80	40	10	10	690	342
101 213 090	90	92	90	40	12	10	850	426
101 213 100	100	102	100	40	12	10	940	501
101 213 120	120	122	120	40	12	10	1130	674

## SPUR GEARS - STEEL

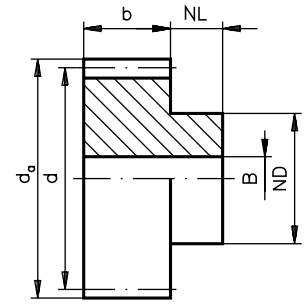
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.5

**Thickness (b)** : 10mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 217 012	12	21	18	15	10	8	25.4	24
101 217 015	15	25.5	22.5	18	10	10	39.7	37
101 217 018	18	30	27	22	10	10	57.2	61
101 217 020	20	33	30	25	10	10	70.7	79
101 217 024	24	39	36	25	10	10	100	101
101 217 025	25	40.5	37.5	25	10	10	110	110
101 217 028	28	45	42	25	10	10	130	131
101 217 030	30	48	45	25	10	10	150	148
101 217 032	32	51	48	25	10	10	180	164
101 217 035	35	55.5	52.5	25	10	10	210	204
101 217 040	40	63	60	25	10	10	280	242
101 217 042	42	66	63	25	10	10	310	267
101 217 045	45	70.5	67.5	25	10	10	350	301
101 217 048	48	75	72	25	10	10	400	339
101 217 050	50	78	75	25	10	10	440	382
101 217 055	55	85.5	82.5	30	10	10	1130	460
101 217 060	60	93	90	30	10	10	1350	535
101 217 065	65	100.5	97.5	45	10	12	1590	742
101 217 070	70	108	105	45	10	12	1840	839
101 217 080	80	123	120	45	10	12	2400	1041



## SPUR GEARS - STEEL

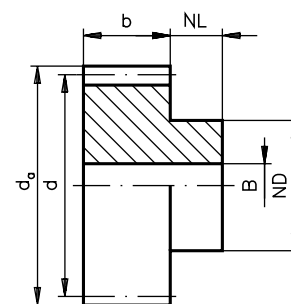
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.0

**Thickness (b)** : 10mm



Order Code	N (teeth)	Overall Dia da	Pitch Dia d	Hub Dia ND	Hub Length NL	Bore B	Torque (Ncm)	Weight (g)
101 214 010	10	12	10	8	6	4	7.8	7
101 214 011	11	13	11	8	6	4	9.5	8
101 214 012	12	14	12	10	6	4	11.3	10
101 214 013	13	15	13	10	6	5	13.2	11
101 214 014	14	16	14	10	6	5	15.3	14
101 214 015	15	17	15	12	6	5	17.6	16
101 214 016	16	18	16	12	6	5	20.1	18
101 214 017	17	19	17	12	6	6	22.7	19
101 214 018	18	20	18	15	6	6	25.4	24
101 214 019	19	21	19	15	6	6	28.3	26
101 214 020	20	22	20	15	6	6	31.4	28
101 214 021	21	23	21	15	6	6	34.6	31
101 214 022	22	24	22	15	6	6	38	33
101 214 023	23	25	23	15	6	6	41.5	36
101 214 024	24	26	24	15	6	6	45.2	39
101 214 025	25	27	25	20	6	8	49.1	46
101 214 026	26	28	26	20	6	8	53.1	49
101 214 027	27	29	27	20	6	8	57.3	52
101 214 028	28	30	28	20	6	8	61.5	55
101 214 029	29	31	29	20	6	8	66	59
101 214 030	30	32	30	25	8	8	70.7	77
101 214 031	31	33	31	25	8	8	75.5	80
101 214 032	32	34	32	25	8	8	80.4	85
101 214 033	33	35	33	25	8	8	85.5	89
101 214 034	34	36	34	25	8	8	90.8	92
101 214 035	35	37	35	25	8	8	96.2	96
101 214 036	36	38	36	25	8	8	100	102
101 214 037	37	39	37	25	8	8	100	106
101 214 038	38	40	38	25	8	8	110	110
101 214 039	39	41	39	25	8	8	110	115
101 214 040	40	42	40	25	8	8	120	120
101 214 041	41	43	41	25	8	8	130	125
101 214 042	42	44	42	25	8	8	130	131
101 214 043	43	45	43	25	8	8	140	134
101 214 044	44	46	44	25	8	8	150	140
101 214 045	45	47	45	30	10	10	150	165
101 214 046	46	48	46	30	10	10	160	171
101 214 047	47	49	47	30	10	10	170	177
101 214 048	48	50	48	30	10	10	180	182
101 214 049	49	51	49	30	10	10	180	188
101 214 050	50	52	50	30	10	10	190	193
101 214 052	52	54	52	40	10	10	210	249
101 214 053	53	55	53	40	10	10	220	254
101 214 054	54	56	54	40	10	10	220	262

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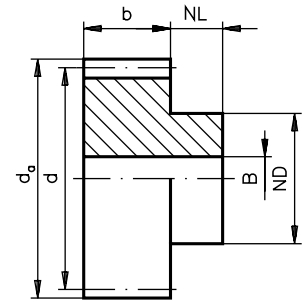
# SPUR GEARS - STEEL

Series 101 214 (continued)

Material : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

Module : 1.0

Thickness (b) : 10mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 214 055	55	57	55	40	10	10	230	269
101 214 056	56	58	56	40	12	10	240	275
101 214 057	57	59	57	40	12	10	250	300
101 214 058	58	60	58	40	12	10	260	307
101 214 060	60	62	60	40	12	10	280	320
101 214 062	62	64	62	40	12	10	300	337
101 214 064	64	66	64	40	12	10	320	352
101 214 065	65	67	65	40	12	10	330	360
101 214 068	68	70	68	40	12	10	360	386
101 214 070	70	72	70	40	12	10	380	401
101 214 072	72	74	72	50	12	10	400	484
101 214 074	74	76	74	50	12	10	430	502
101 214 075	75	77	75	50	12	10	440	510
101 214 076	76	78	76	50	12	10	450	521
101 214 078	78	80	78	50	12	10	1010	541
101 214 080	80	82	80	50	12	10	1070	560
101 214 082	82	84	82	50	12	10	1120	583
101 214 083	83	85	83	50	12	10	1150	594
101 214 085	85	87	85	50	12	10	1200	611
101 214 087	87	89	87	50	12	10	1260	633
101 214 090	90	92	90	50	12	12	1310	659
101 214 095	95	97	95	60	12	12	1380	795
101 214 100	100	102	100	60	12	12	1440	856
101 214 110	110	112	110	60	12	12	1590	983
101 214 114	114	116	114	60	12	12	1650	1036
101 214 120	120	122	120	60	12	12	1730	1125

## SPUR GEARS - STEEL

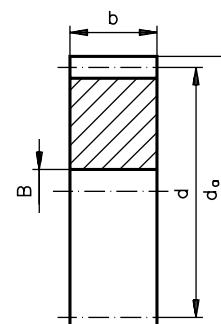
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.0

**Thickness (b)** : 10mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Ncm)	Weight (g)
101 224 020	20	22	20	6	31.4	21
101 224 021	21	23	21	6	34.6	26
101 224 022	22	24	22	6	38	26
101 224 023	23	25	23	6	41.5	29
101 224 024	24	26	24	6	45.2	32
101 224 025	25	27	25	6	49.1	35
101 224 026	26	28	26	6	53.1	38
101 224 027	27	29	27	6	57.2	41
101 224 028	28	30	28	6	61.7	44
101 224 030	30	32	30	8	70.7	50
101 224 032	32	34	32	8	80.4	54
101 224 033	33	35	33	8	85.5	61
101 224 034	34	36	34	8	90.8	65
101 224 035	35	37	35	8	96.2	69
101 224 036	36	38	36	8	100	74
101 224 037	37	39	37	8	100	79
101 224 038	38	40	38	8	110	82
101 224 039	39	41	39	8	110	87
101 224 040	40	42	40	8	120	92
101 224 041	41	43	41	8	130	97
101 224 042	42	44	42	8	135	101
101 224 043	43	45	43	8	140	108
101 224 044	44	46	44	8	150	113
101 224 045	45	47	45	10	150	116
101 224 046	46	48	46	10	160	121
101 224 047	47	49	47	10	170	128
101 224 048	48	50	48	10	180	133
101 224 049	49	51	49	10	180	139
101 224 050	50	52	50	10	190	145
101 224 051	51	53	51	10	200	152
101 224 052	52	54	52	10	210	157
101 224 053	53	55	53	10	220	163
101 224 054	54	56	54	10	220	170
101 224 055	55	57	55	10	230	176
101 224 056	56	58	56	10	240	183
101 224 059	59	61	59	10	270	204
101 224 060	60	62	60	10	280	212
101 224 061	61	63	61	10	290	218
101 224 063	63	65	63	10	310	234
101 224 064	64	66	64	10	320	242
101 224 065	65	67	65	10	330	249
101 224 066	66	68	66	10	340	260
101 224 067	67	69	67	10	350	265
101 224 068	68	70	68	10	360	274

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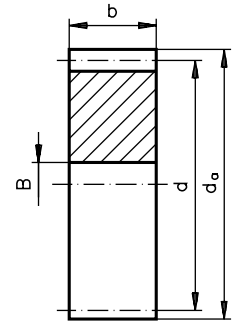
## SPUR GEARS - STEEL

Series 101 224 (continued)

Material : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

Module : 1.0

Thickness (b) : 10mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Ncm)	Weight (g)
101 224 069	69	71	69	10	370	283
101 224 070	70	72	70	10	380	290
101 224 071	71	73	71	10	390	301
101 224 072	72	74	72	10	400	309
101 224 073	73	75	73	10	410	317
101 224 075	75	77	75	10	440	334
101 224 076	76	78	76	10	450	343
101 224 077	77	79	77	10	460	351
101 224 078	78	80	78	10	1010	366
101 224 079	79	81	79	10	1040	373
101 224 080	80	82	80	10	1070	384
101 224 082	82	84	82	10	1120	401
101 224 084	84	86	84	10	1180	423
101 224 085	85	87	85	12	1200	427
101 224 090	90	92	90	12	1310	486
101 224 092	92	94	92	12	1340	508
101 224 096	96	98	96	12	1390	550
101 224 100	100	102	100	12	1440	601
101 224 105	105	107	105	12	1520	662
101 224 110	110	112	110	12	1590	728
101 224 114	114	116	114	12	1650	783
101 224 120	120	122	120	12	1730	870
101 224 124	124	126	124	12	1790	934

## SPUR GEARS - STEEL

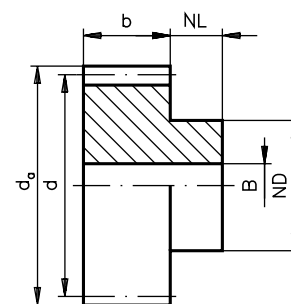
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.25

**Thickness (b)** : 10mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 216 012	12	17.5	15	12	10	5	17.6	19
101 216 013	13	18.75	16.25	12	10	5	20.7	21
101 216 014	14	20	17.5	12	10	5	24	24
101 216 015	15	21.25	18.75	15	10	6	27.6	30
101 216 016	16	22.5	20	15	10	6	31.4	33
101 216 017	17	23.75	21.25	15	10	6	31.4	33
101 216 018	18	25	22.5	15	10	6	39.7	40
101 216 019	19	26.25	23.75	15	10	6	44.3	43
101 216 020	20	27.5	25	15	10	6	49.1	46
101 216 021	21	28.75	26.25	15	10	6	54.1	50
101 216 022	22	30	27.5	20	10	8	59.4	61
101 216 023	23	31.25	28.75	20	10	8	64.9	66
101 216 024	24	32.5	30	20	10	8	70.8	70
101 216 025	25	33.75	31.25	20	10	8	76.7	75
101 216 026	26	35	32.5	20	10	8	82.9	80
101 216 027	27	36.25	33.75	20	10	8	89.4	88
101 216 028	28	37.5	35	20	10	8	96.2	90
101 216 030	30	40	37.5	25	10	10	110	111
101 216 032	32	42.5	40	25	10	10	120	121
101 216 035	35	46.25	43.75	25	10	10	150	140
101 216 036	36	47.5	45	25	10	10	150	147
101 216 037	37	48.75	46.25	25	10	10	160	154
101 216 038	38	50	47.5	30	10	10	170	179
101 216 040	40	52.5	50	30	12	10	190	204
101 216 042	42	55	52.5	30	12	10	210	218
101 216 045	45	58.75	56.25	30	12	10	240	244
101 216 048	48	62.5	60	30	12	10	280	268
101 216 050	50	65	62.5	30	12	10	300	291
101 216 052	52	67.5	65	30	12	10	330	307
101 216 054	54	70	67.5	40	12	10	350	380
101 216 055	55	71.25	68.75	40	12	10	370	392
101 216 056	56	72.5	70	40	12	10	380	402
101 216 057	57	73.75	71.25	40	12	10	390	407
101 216 060	60	77.5	75	40	12	10	440	444
101 216 064	64	82.5	80	40	12	10	1070	491
101 216 065	65	83.75	81.25	40	12	10	1100	507
101 216 070	70	90	87.5	40	12	12	1280	566
101 216 072	72	92.5	90	40	12	12	1350	594
101 216 075	75	96.25	93.75	40	12	12	1470	634
101 216 076	76	97.5	95	50	12	12	1510	712
101 216 080	80	102.5	100	50	12	12	1670	772
101 216 085	85	108.75	106.25	50	12	12	1880	868
101 216 090	90	115	112.5	50	12	12	2040	938
101 216 100	100	127.5	125	50	12	12	2260	1119
101 216 120	120	152.5	150	50	12	12	2710	1537

## SPUR GEARS - STEEL

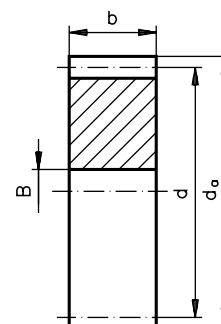
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.25

**Thickness (b)** : 10mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Ncm)	Weight (g)
101 226 016	16	22.5	20	6	31.4	21
101 226 017	17	23.75	21.25	6	35.4	25
101 226 019	19	26.25	23.75	6	44.3	32
101 226 020	20	27.5	25	6	49.1	35
101 226 021	21	28.75	26.25	6	54.1	40
101 226 022	22	30	27.5	6	59.4	43
101 226 023	23	31.25	28.75	6	64.9	48
101 226 024	24	32.5	30	8	70.7	50
101 226 025	25	33.75	31.25	8	76.7	55
101 226 026	26	35	32.5	8	82.9	59
101 226 027	27	36.25	33.75	8	89.4	64
101 226 028	28	37.5	35	8	96.2	70
101 226 030	30	40	37.5	10	110	81
101 226 032	32	42.5	40	10	120	90
101 226 034	34	45	42.5	10	140	103
101 226 035	35	46.25	43.75	10	150	109
101 226 036	36	47.5	45	10	156.7	117
101 226 038	38	50	47.5	10	170	129
101 226 040	40	52.5	50	10	190	144
101 226 042	42	55	52.5	10	210	159
101 226 045	45	58.75	56.25	10	240	184
101 226 048	48	62.5	60	10	280	209
101 226 050	50	65	62.5	10	300	229
101 226 052	52	67.5	65	10	330	250
101 226 054	54	70	67.5	10	350	267
101 226 055	55	71.25	68.75	10	370	278
101 226 056	56	72.5	70	10	380	291
101 226 057	57	73.75	71.25	10	390	300
101 226 060	60	77.5	75	10	440	334
101 226 064	64	82.5	80	10	1070	384
101 226 065	65	83.75	81.25	10	1100	396
101 226 070	70	90	87.5	12	1280	460
101 226 072	72	92.5	90	12	1350	488
101 226 075	75	96.25	93.75	12	1470	525
101 226 076	76	97.5	95	12	1510	540
101 226 080	80	102.5	100	12	1674.4	601
101 226 085	85	108.75	106.25	12	1880	679
101 226 090	90	115	112.5	12	2040	758
101 226 095	95	121.25	118.75	12	2160	842
101 226 100	100	127.5	125	15	2260	940
101 226 114	114	145	142.5	15	2580	1220
101 226 120	120	152.5	150	20	2710	1335

## SPUR GEARS - STEEL

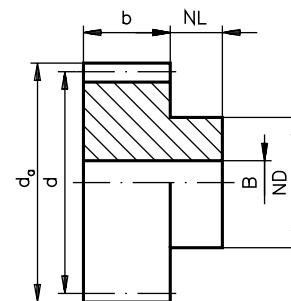
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.5

**Thickness (b)** : 15mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 218 012	12	21	18	15	10	8	38.1	32
101 218 013	13	22.5	19.5	15	10	8	44.8	37
101 218 014	14	24	21	15	10	8	51.9	42
101 218 015	15	25.5	22.5	18	10	10	59.85	49
101 218 016	16	27	24	20	10	10	67.8	60
101 218 017	17	28.5	25.5	20	10	10	76.6	66
101 218 018	18	30	27	22	10	10	85.9	79
101 218 019	19	31.5	28.5	25	10	10	95.7	95
101 218 020	20	33	30	25	10	10	100	103
101 218 021	21	34.5	31.5	25	15	10	110	128
101 218 022	22	36	33	25	15	10	120	136
101 218 023	23	37.5	34.5	25	15	10	140	145
101 218 024	24	39	36	25	15	10	150	154
101 218 025	25	40.5	37.5	25	15	10	160	166
101 218 026	26	42	39	25	15	10	170	175
101 218 027	27	43.5	40.5	25	15	10	190	185
101 218 028	28	45	42	25	15	10	200	198
101 218 030	30	48	45	30	15	10	230	246
101 218 031	31	49.5	46.5	30	15	10	250	259
101 218 032	32	51	48	30	15	10	270	273
101 218 034	34	54	51	30	15	10	300	298
101 218 035	35	55.5	52.5	30	15	10	320	317
101 218 036	36	57	54	40	15	10	340	392
101 218 038	38	60	57	40	15	10	380	422
101 218 040	40	63	60	40	15	10	420	454
101 218 042	42	66	63	40	15	10	460	488
101 218 044	44	69	66	40	15	10	510	523
101 218 045	45	70.5	67.5	40	15	10	530	541
101 218 046	46	72	69	40	15	10	560	560
101 218 048	48	75	72	40	15	10	610	599
101 218 050	50	78	75	50	15	10	660	721
101 218 052	52	81	78	50	15	10	1520	765
101 218 054	54	84	81	50	15	10	1640	810
101 218 055	55	85.5	82.5	50	15	10	1700	831
101 218 056	56	87	84	50	15	10	1770	855
101 218 057	57	88.5	85.5	50	15	10	1830	880
101 218 058	58	90	87	50	15	10	1900	905
101 218 060	60	93	90	60	15	12	2030	1041
101 218 062	62	96	93	60	15	12	2170	1096
101 218 063	63	97.5	94.5	60	15	12	2240	1122
101 218 064	64	99	96	60	15	12	2310	1148
101 218 065	65	100.5	97.5	60	15	12	2380	1172
101 218 068	68	105	102	60	15	12	2610	1254
101 218 070	70	108	105	60	20	12	2760	1423

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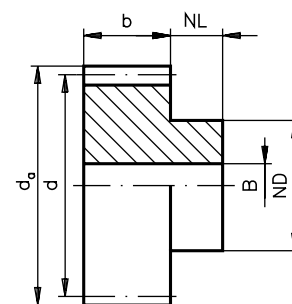
# SPUR GEARS - STEEL

Series 101 218 (continued)

Material : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

Module : 1.5

Thickness (b) : 15mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Ncm)	Weight (g)
101 218 072	120	111	108	70	20	12	2920	1683
101 218 074	74	114	111	70	20	12	3090	1716
101 218 075	75	115.5	112.5	70	20	12	3170	1726
101 218 076	76	117	114	70	20	15	3260	1746
101 218 078	78	120	117	70	20	15	3430	1782
101 218 080	80	123	120	70	20	15	3610	1878
101 218 082	82	126	123	70	20	15	3790	1941
101 218 085	85	130.5	127.5	70	20	15	4080	2038
101 218 090	90	138	135	70	20	15	4420	2221
101 218 095	95	145.5	142.5	70	20	15	4670	2398
101 218 100	100	153	150	70	20	15	4890	2620
101 218 114	114	174	171	70	20	20	5570	3166
101 218 120	120	183	180	70	20	20	5860	3468



## SPUR GEARS - STEEL

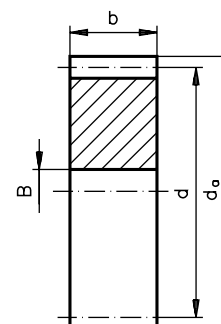
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 1.5

**Thickness (b)** : 15mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Ncm)	Weight (g)
101 228 020	20	33	30	8	100	75.0
101 228 021	21	34.5	31.5	8	110.0	83
101 228 023	23	37.5	34.5	8	140.0	101
101 228 024	24	39	36	8	150.0	110
101 228 025	25	40.5	37.5	8	160.0	120
101 228 026	26	42	39	8	170.0	131
101 228 027	27	43.5	40.5	8	190.0	141
101 228 028	28	45	42	10	200.0	149
101 228 029	29	46.5	43.5	10	220.0	161
101 228 030	30	48	45	10	230.0	174
101 228 032	32	51	48	10	270.0	199
101 228 033	33	52.5	49.5	10	280.0	212
101 228 035	35	55.5	52.5	10	320.0	240
101 228 037	37	58.5	55.5	10	360.0	267
101 228 038	38	60	57	10	380.0	284
101 228 039	39	61.5	58.5	10	400.0	300
101 228 040	40	63	60	10	420.0	316
101 228 041	41	64.5	61.5	10	440.0	336
101 228 043	43	67.5	64.5	10	490.0	367
101 228 045	45	70.5	67.5	10	530.0	403
101 228 047	47	73.5	70.5	10	580.0	441
101 228 048	48	75	72	10	610.0	460
101 228 049	49	76.5	73.5	10	630.0	480
101 228 050	50	78	75	10	660.0	500
101 228 051	51	79.5	76.5	10	680.0	525
101 228 052	52	81	78	10	1520.0	545
101 228 053	53	82.5	79.5	10	1580.0	574
101 228 054	54	84	81	12	1640.0	585
101 228 055	55	85.5	82.5	12	1700.0	607
101 228 056	56	87	84	12	1770.0	629
101 228 059	59	91.5	88.5	12	1960.0	702
101 228 060	60	93	90	12	2030.0	726
101 228 061	61	94.5	91.5	12	2100.0	752
101 228 064	64	99	96	12	2310.0	832
101 228 065	65	100.5	97.5	12	2380.0	850
101 228 067	67	103.5	100.5	12	2530.0	909
101 228 069	69	106.5	103.5	12	2680.0	996
101 228 070	70	108	105	12	2760.0	990
101 228 071	71	109.5	106.5	12	2840.0	1022
101 228 072	72	111	108	12	2920.0	1051
101 228 073	73	112.5	109.5	12	3000.0	182
101 228 075	75	115.5	112.5	12	3170.0	1146

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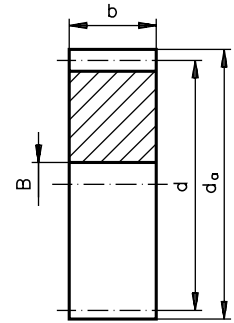
## SPUR GEARS - STEEL

Series 101 228 (continued)

Material : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

Module : 1.5

Thickness (b) : 15mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Ncm)	Weight (g)
101 228 076	76	117	114	15	3260.0	1166
101 228 077	77	118.5	115.5	15	3340.0	1197
101 228 079	120	121.5	118.5	15	3520.0	1263
101 228 080	80	123	120	15	3610.0	1298
101 228 081	81	124.5	121.5	15	3700.0	1335
101 228 083	83	127.5	124.5	15	3890.0	1395
101 228 084	84	129	126	15	3980.0	1454
101 228 085	85	130.5	127.5	15	4080.0	1455
101 228 086	86	132	129	15	4170.0	1495
101 228 087	87	133.5	130.5	15	4270.0	1529
101 228 088	88	135	132	15	4330.0	1576
101 228 089	89	136.5	133.5	15	4380.0	1611
101 228 090	90	138	135	15	4420.0	1659
101 228 091	91	139.5	136.5	15	4470.0	1687
101 228 092	92	141	138	15	4520.0	1724
101 228 093	93	142.5	139.5	15	4570.0	1755
101 228 094	94	144	141	15	4620.0	1797
101 228 095	95	145.5	142.5	15	4670.0	1825
101 228 096	96	147	144	15	4700.0	1878
101 228 100	100	153	150	15	4890.0	2048
101 228 110	110	168	165	20	5370.0	2465
101 228 114	114	174	171	20	5570.0	2647
101 228 120	120	183	180	20	5860.0	2939

## SPUR GEARS - STEEL

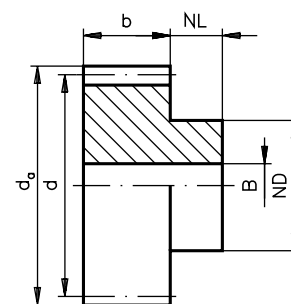
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 2.0

**Thickness (b)** : 16mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Nm)	Weight (g)
101 231 010	10	24	20	15	15	8	0.50	45.0
101 231 012	12	28	24	20	15	10	0.72	70
101 231 013	13	30	26	20	15	10	0.85	81
101 231 014	14	32	28	25	15	10	0.98	110
101 231 015	15	34	30	25	15	12	1.10	114
101 231 016	16	36	32	25	15	12	1.20	126
101 231 017	17	38	34	25	15	12	1.40	139
101 231 018	18	40	36	30	15	12	1.60	179
101 231 019	19	42	38	30	15	12	1.80	192
101 231 020	20	44	40	30	15	12	2.00	207
101 231 021	21	46	42	30	15	12	2.20	224
101 231 022	22	48	44	30	15	12	2.40	240
101 231 023	23	50	46	30	15	12	2.60	257
101 231 024	24	52	48	30	15	12	2.80	275
101 231 025	25	54	50	30	15	12	3.10	295
101 231 026	26	56	52	35	15	12	3.30	344
101 231 027	27	58	54	35	15	12	3.60	364
101 231 028	28	60	56	35	15	12	3.90	386
101 231 029	29	62	58	35	15	12	4.20	409
101 231 030	30	64	60	40	15	12	4.50	466
101 231 031	31	66	62	40	15	12	4.80	489
101 231 032	32	68	64	40	15	12	5.10	514
101 231 034	34	72	68	40	15	12	5.80	566
101 231 035	35	74	70	45	15	12	6.10	632
101 231 036	36	76	72	45	15	12	6.50	659
101 231 037	37	78	74	45	15	12	6.80	689
101 231 038	38	80	76	45	15	12	15.40	720
101 231 040	40	84	80	50	15	12	17.10	825
101 231 042	42	88	84	50	15	12	18.80	891
101 231 044	44	92	88	50	15	12	20.70	955
101 231 045	45	94	90	50	15	12	21.60	991
101 231 046	46	96	92	50	15	12	22.60	1025
101 231 047	47	98	94	50	15	12	23.60	1055
101 231 048	48	100	96	50	15	12	24.60	1098
101 231 050	50	104	100	50	15	12	26.70	1174
101 231 052	52	108	104	60	15	12	28.90	1357
101 231 053	53	110	106	60	15	12	30.00	1396
101 231 054	54	112	108	60	15	12	31.20	1442
101 231 055	55	114	110	60	15	12	32.30	1485
101 231 056	56	116	112	60	15	12	33.50	1527
101 231 057	57	118	114	70	15	12	34.70	1688
101 231 058	58	120	116	70	15	12	36.00	1737
101 231 059	59	122	118	70	15	12	37.20	1784
101 231 060	60	124	120	70	15	12	38.50	1827

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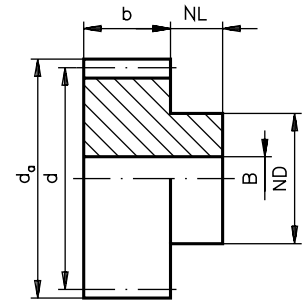
## SPUR GEARS - STEEL

Series 101 231 (continued)

Material : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

Module : 2.0

Thickness (b) : 16mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Nm)	Weight (g)
101 231 062	120	128	124	70	15	12	41.10	1929
101 231 063	63	130	126	70	15	12	42.50	1969
101 231 064	64	132	128	70	15	12	43.80	2028
101 231 065	65	134	130	70	20	15	45.20	2194
101 231 067	67	138	134	70	20	15	48.00	2306
101 231 068	68	140	136	70	20	15	49.50	2360
101 231 070	70	144	140	70	20	15	52.40	2463
101 231 072	72	148	144	80	20	15	55.50	2769
101 231 074	74	152	148	80	20	15	58.60	2883
101 231 075	75	154	150	80	20	15	60.20	2945
101 231 076	76	156	152	80	20	15	61.80	2982
101 231 078	78	160	156	80	20	15	65.10	3129
101 231 080	80	164	160	80	20	20	68.50	3196
101 231 085	85	174	170	80	20	20	77.30	3513
101 231 090	90	184	180	80	20	20	83.90	3875
101 231 095	95	194	190	100	20	20	88.60	4652
101 231 100	100	204	200	100	20	20	92.70	5056
101 231 110	110	224	220	100	20	20	102.00	5856
101 231 114	114	232	228	100	20	20	105.70	6179
101 231 120	120	244	240	100	20	20	111.20	6822

## SPUR GEARS - STEEL

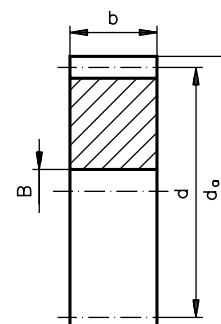
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

**Module** : 2.0

**Thickness (b)** : 16mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (g)
101 241 018	18	40	36	12	1.6	108
101 241 020	20	44	40	12	2.0	138
101 241 021	21	46	42	12	2.2	154
101 241 022	22	48	44	12	2.4	170
101 241 023	23	50	46	12	2.6	187
101 241 024	24	52	48	12	2.8	206
101 241 025	25	54	50	12	3.1	225
101 241 026	26	56	52	12	3.3	244
101 241 027	27	58	54	12	3.6	265
101 241 028	28	60	56	12	3.9	286
101 241 030	30	64	60	12	4.5	330
101 241 032	32	68	64	12	5.1	380
101 241 035	35	74	70	12	6.1	457
101 241 036	36	76	72	12	6.5	486
101 241 037	37	78	74	12	6.8	514
101 241 038	38	80	76	12	15.4	545
101 241 039	39	82	78	12	16.2	578
101 241 040	40	84	80	12	17.1	605
101 241 041	41	86	82	12	18.0	639
101 241 042	42	88	84	12	18.8	668
101 241 043	43	90	86	12	19.8	703
101 241 045	45	94	90	12	21.6	773
101 241 047	47	98	94	12	23.6	843
101 241 048	48	100	96	12	24.6	879
101 241 049	49	102	98	12	25.7	921
101 241 050	50	104	100	12	26.7	954
101 241 051	51	106	102	12	27.8	995
101 241 052	52	108	104	12	28.9	1038
101 241 053	53	110	106	12	30.0	1092
101 241 054	54	112	108	12	31.2	1124
101 241 055	55	114	110	12	32.3	1153
101 241 056	56	116	112	12	33.5	1208
101 241 057	57	118	114	12	34.7	1249
101 241 060	60	124	120	12	38.5	1385
101 241 061	61	126	122	12	39.8	1443
101 241 063	63	130	126	12	42.5	1530
101 241 064	64	132	128	15	13.8	1576
101 241 065	65	134	130	15	45.2	1625
101 241 067	67	138	134	15	48.0	1733
101 241 070	70	144	140	15	52.4	1886
101 241 072	72	148	144	15	55.5	1988
101 241 075	75	154	150	15	60.2	2178

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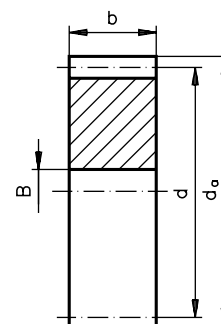
## SPUR GEARS - STEEL

Series 101 241 (continued)

Material : Steel - Up to 80Ø 9 SMn 28K  
Over 80Ø C45

Module : 2.0

Thickness (b) : 16mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (g)
101 241 076	76	156	152	15	61.8	2229
101 241 078	78	160	156	15	65.1	2358
101 241 080	120	164	160	20	68.5	2458
101 241 085	85	174	170	20	77.3	2782
101 241 090	90	184	180	20	83.9	3134
101 241 095	95	194	190	20	88.6	3493
101 241 096	96	196	192	20	89.2	3556
101 241 100	100	204	200	20	92.7	3870
101 241 114	114	232	228	20	105.7	5052
101 241 120	120	244	240	20	111.2	5585

## SPUR GEARS - STEEL

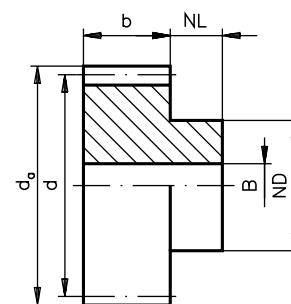
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 2.5

**Thickness (b)** : 20mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Nm)	Weight (kg)
101 232 012	12	35	30	20	15	12	3.0	0.11
101 232 013	13	37.5	32.5	20	15	12	3.5	0.12
101 232 014	14	40	35	20	15	12	4.1	0.14
101 232 015	15	42.5	37.5	25	15	12	4.7	0.19
101 232 016	16	45	40	25	15	12	5.3	0.21
101 232 017	17	47.5	42.5	25	15	12	6.0	0.23
101 232 018	18	50	45	30	15	12	6.7	0.29
101 232 019	19	52.5	47.5	30	15	12	7.5	0.31
101 232 020	20	55	50	30	15	12	8.3	0.34
101 232 021	21	57.5	52.5	30	15	12	9.2	0.38
101 232 022	22	60	55	30	15	12	10.1	0.41
101 232 023	23	62.5	57.5	40	15	12	11.0	0.51
101 232 024	24	65	60	40	15	12	12.0	0.54
101 232 025	25	67.5	62.5	40	15	12	13.0	0.58
101 232 026	26	70	65	40	15	12	14.1	0.62
101 232 027	27	72.5	67.5	40	15	12	15.2	0.66
101 232 028	28	75	70	40	15	12	16.4	0.70
101 232 030	30	80	75	40	15	12	18.8	0.79
101 232 032	32	85	80	50	15	15	21.4	0.95
101 232 034	34	90	85	50	15	15	24.1	1.04
101 232 035	35	92.5	87.5	50	15	15	25.6	1.10
101 232 036	36	95	90	60	15	15	27.1	1.25
101 232 038	38	100	95	60	15	15	30.2	1.38
101 232 040	40	105	100	60	20	15	33.4	1.60
101 232 042	42	110	105	60	20	15	36.9	1.72
101 232 045	45	117.5	112.5	60	20	15	42.3	1.92
101 232 046	46	120	115	60	20	15	44.2	1.98
101 232 048	48	125	120	60	20	15	48.1	2.14
101 232 050	50	130	125	70	20	15	52.2	2.43
101 232 052	52	135	130	70	20	15	56.5	2.60
101 232 054	54	140	135	70	20	20	60.9	2.73
101 232 055	55	142.5	137.5	70	20	20	63.2	2.78
101 232 056	56	145	140	70	20	20	65.6	2.89
101 232 060	60	155	150	70	20	20	75.3	3.24
101 232 062	62	160	155	70	20	20	80.4	3.43
101 232 065	65	167.5	162.5	80	20	20	88.3	3.90
101 232 070	70	180	175	80	20	20	102.5	4.44
101 232 072	72	185	180	80	20	20	108.4	4.62
101 232 075	75	192.5	187.5	90	20	20	117.6	5.19
101 232 080	80	205	200	90	20	20	133.8	5.79
101 232 082	82	210	205	90	20	20	140.6	6.05
101 232 085	85	217.5	212.5	100	20	20	151.1	6.69
101 232 090	90	230	225	100	20	20	163.9	7.31
101 232 092	92	235	230	100	20	20	167.6	7.60

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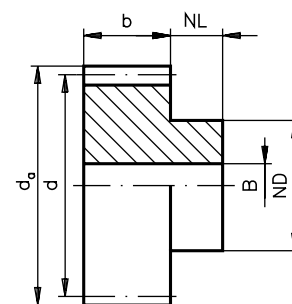
## SPUR GEARS - STEEL

Series 101 232 (continued)

Material : Steel C45

Module : 2.5

Thickness (b) : 20mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Nm)	Weight (kg)
101 232 095	120	242.5	237.5	100	20	20	173.0	7.97
101 232 100	100	255	250	100	20	25	181.1	8.74
101 232 110	110	280	275	120	20	25	199.2	10.86
101 232 114	114	290	285	120	20	25	206.4	11.61
101 232 120	120	305	300	120	20	25	217.3	12.64
101 232 127	127	322.5	317.5	120	20	25	230	13.96



## SPUR GEARS - STEEL

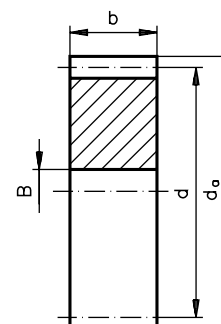
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 2.5

**Thickness (b)** : 20mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (kg)
101 242 022	22	60	55	12	10.1	0.34
101 242 023	23	62.5	57.5	12	11.0	0.37
101 242 024	24	65	60	12	12.0	0.41
101 242 025	25	67.5	62.5	12	13.0	0.45
101 242 026	26	70	65	12	14.1	0.49
101 242 029	29	77.5	72.5	12	17.5	0.61
101 242 030	30	80	75	12	18.8	0.66
101 242 031	31	82.5	77.5	12	20.1	0.70
101 242 033	33	87.5	82.5	15	22.7	0.79
101 242 034	34	90	85	15	24.1	0.84
101 242 035	35	92.5	87.5	15	25.6	0.89
101 242 037	37	97.5	92.5	15	28.6	1.00
101 242 039	39	102.5	97.5	15	31.8	1.12
101 242 040	40	105	100	15	33.4	1.18
101 242 041	41	107.5	102.5	15	35.1	1.24
101 242 043	43	112.5	107.5	15	38.6	1.38
101 242 044	44	115	110	15	40.4	1.43
101 242 045	45	117.5	112.5	15	42.3	1.50
101 242 047	47	122.5	117.5	15	46.2	1.64
101 242 049	49	127.5	122.5	15	50.2	1.79
101 242 050	50	130	125	15	52.2	1.86
101 242 051	51	132.5	127.5	15	54.4	1.94
101 242 053	53	137.5	132.5	15	58.7	2.10
101 242 054	54	140	135	20	60.9	2.17
101 242 055	55	142.5	137.5	20	63.2	2.25
101 242 056	56	145	140	20	65.6	2.33
101 242 057	57	147.5	142.5	20	67.9	2.43
101 242 060	60	155	150	20	75.3	2.69
101 242 070	70	180	175	20	102.5	3.68
101 242 076	76	195	190	20	120.8	4.35
101 242 080	80	205	200	20	133.8	4.83
101 242 090	90	230	225	20	163.9	6.13
101 242 100	100	255	250	20	181.1	7.62
101 242 114	114	290	285	25	206.4	9.80
101 242 120	120	305	300	25	217.3	10.94

## SPUR GEARS - STEEL

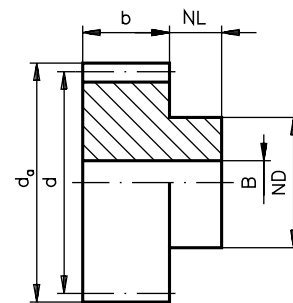
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 3.0

**Thickness (b)** : 25mm



Order Code	N (teeth)	Overall Dia da	Pitch Dia d	Hub Dia ND	Hub Length NL	Bore B	Torque (Nm)	Weight (kg)
101 233 012	12	42	36	25	15	12	5.4	0.21
101 233 013	13	45	39	25	15	12	6.3	0.24
101 233 014	14	48	42	25	15	12	7.3	0.28
101 233 015	15	51	45	35	15	12	8.4	0.37
101 233 016	16	54	48	35	15	12	9.6	0.41
101 233 017	17	57	51	35	15	12	10.8	0.46
101 233 018	18	60	54	45	15	12	12.1	0.58
101 233 019	19	63	57	45	15	12	13.5	0.63
101 233 020	20	66	60	45	15	15	15.0	0.67
101 233 021	21	69	63	45	15	15	16.6	0.72
101 233 022	22	72	66	45	15	15	18.2	0.78
101 233 023	23	75	69	50	15	15	19.9	0.89
101 233 024	24	78	72	50	15	15	21.6	0.95
101 233 025	25	81	75	50	15	15	23.5	1.01
101 233 026	26	84	78	50	15	15	25.4	1.08
101 233 027	27	87	81	50	15	15	27.4	1.16
101 233 028	28	90	84	50	15	20	29.5	1.19
101 233 030	30	96	90	50	15	20	33.8	1.35
101 233 032	32	102	96	60	15	20	38.5	1.62
101 233 035	35	111	105	60	15	20	46.1	1.90
101 233 036	36	114	108	60	15	20	48.7	2.00
101 233 038	38	120	114	60	20	20	54.3	2.30
101 233 040	40	126	120	70	20	20	60.2	2.67
101 233 042	42	132	126	70	20	20	66.4	2.89
101 233 045	45	141	135	70	20	20	76.2	3.26
101 233 048	48	150	144	80	20	20	86.7	3.84
101 233 050	50	156	150	80	20	20	94.1	4.10
101 233 052	52	162	156	80	20	20	101.8	4.39
101 233 054	54	168	162	80	20	20	109.7	4.66
101 233 055	55	171	165	80	20	20	113.9	4.82
101 233 056	56	174	168	90	20	20	118.0	5.18
101 233 057	57	177	171	90	20	20	122.3	5.33
101 233 058	58	180	174	90	20	20	126.6	5.49
101 233 060	60	186	180	90	20	20	135.5	5.83
101 233 065	65	201	195	90	20	20	159.0	6.67
101 233 067	67	207	201	90	20	20	169.0	7.04
101 233 070	70	216	210	90	20	20	184.5	7.64
101 233 072	72	222	216	100	20	20	195.1	8.22
101 233 075	75	231	225	100	20	20	211.8	8.87
101 233 076	76	234	228	100	20	30	217.4	8.94
101 233 080	80	246	240	100	20	30	240.9	9.77
101 233 090	90	276	270	100	20	30	25.1	12.12
101 233 100	100	306	300	100	20	30	326.0	14.72
101 233 114	114	348	342	100	20	30	371.6	18.79
101 233 120	120	366	360	100	20	30	391.2	21.00

## SPUR GEARS - STEEL

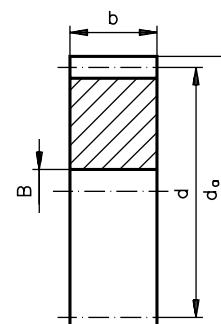
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 3.0

**Thickness (b)** : 25mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (kg)
101 243 020	20	66	60	15	15.0	0.50
101 243 021	21	69	63	15	16.6	0.55
101 243 024	24	78	72	15	21.6	0.74
101 243 025	25	81	75	15	23.5	0.81
101 243 028	28	90	84	15	29.5	1.02
101 243 030	30	96	90	20	33.8	1.15
101 243 035	35	111	105	20	46.1	1.61
101 243 037	37	117	111	20	51.5	1.80
101 243 038	38	120	114	20	54.3	1.91
101 243 040	40	126	120	20	60.2	2.11
101 243 042	42	132	126	20	66.4	2.34
101 243 045	45	141	135	20	76.2	2.70
101 243 046	46	144	138	20	79.6	2.81
101 243 047	47	147	141	20	83.1	2.95
101 243 048	48	150	144	20	86.7	3.09
101 243 050	50	156	150	20	94.1	3.34
101 243 052	52	162	156	20	101.8	3.64
101 243 053	53	165	159	20	105.7	3.78
101 243 056	56	174	168	20	118.0	4.23
101 243 058	58	180	174	20	126.6	4.54
101 243 060	60	186	180	20	135.5	4.87
101 243 065	65	201	195	20	159.0	5.72
101 243 067	67	207	201	20	169.0	6.09
101 243 070	70	216	210	20	184.0	6.67
101 243 072	72	222	216	30	195.1	6.99
101 243 076	76	234	228	30	217.4	7.80
101 243 080	80	246	240	30	240.9	8.63
101 243 090	90	276	270	30	295.1	11.00
101 243 096	96	294	288	30	313.7	12.53
101 243 100	100	306	300	30	326.0	13.61
101 243 114	114	348	342	30	371.6	17.72

## SPUR GEARS - STEEL

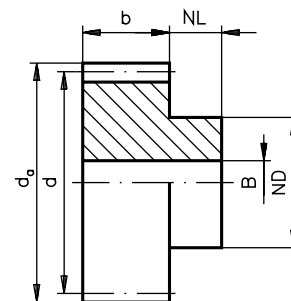
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 4.0

**Thickness (b)** : 30mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Nm)	Weight (kg)
101 234 012	12	56	48	35	20	15	11.5	0.48
101 234 013	13	60	52	35	20	15	13.5	0.55
101 234 014	14	64	56	40	20	15	15.7	0.68
101 234 015	15	68	60	40	20	15	18.0	0.76
101 234 016	16	72	64	40	20	20	20.5	0.80
101 234 017	17	76	68	40	20	20	23.2	0.90
101 234 018	18	80	72	50	20	20	26.0	1.11
101 234 019	19	84	76	50	20	20	28.9	1.21
101 234 020	20	88	80	50	20	20	32.1	1.33
101 234 021	21	92	84	50	20	20	35.4	1.45
101 234 022	22	96	88	50	20	20	38.8	1.58
101 234 023	23	100	92	50	20	20	42.4	1.70
101 234 024	24	944	936	60	20	20	46.2	1.98
101 234 025	25	108	100	60	20	20	500.2	2.12
101 234 026	26	112	104	60	20	20	54.3	2.28
101 234 027	27	116	108	60	20	20	58.5	2.43
101 234 028	28	120	112	60	20	20	62.9	2.58
101 234 030	30	128	120	70	20	20	72.2	3.08
101 234 032	32	136	128	70	20	20	82.2	3.44
101 234 035	35	148	140	70	20	25	98.4	3.97
101 234 036	36	152	144	70	20	25	104.1	4.18
101 234 038	38	160	152	70	20	25	115.9	4.61
101 234 040	40	168	160	80	20	25	128.5	5.27
101 234 042	42	176	168	80	20	25	141.6	5.77
101 234 044	44	184	176	80	20	25	155.5	6.24
101 234 045	45	188	180	80	20	25	162.6	6.52
101 234 046	46	192	184	80	20	25	169.9	6.79
101 234 048	48	200	192	100	20	25	185.0	7.78
101 234 050	50	208	200	100	20	25	200.8	8.36
101 234 052	52	216	208	100	20	25	217.2	8.96
101 234 054	54	224	216	100	20	25	234.2	9.50
101 234 055	55	228	220	100	20	25	242.9	10.00
101 234 056	56	232	224	100	20	25	251.9	10.50
101 234 058	58	240	232	100	20	25	270.2	11.00
101 234 060	60	248	240	100	20	25	289.1	11.50
101 234 065	65	268	260	100	20	30	339.3	13.50
101 234 067	67	276	268	100	20	30	360.5	14.00
101 234 070	70	288	280	100	20	30	393.6	15.30
101 234 072	72	296	288	100	20	30	416.4	16.00
101 234 075	75	308	300	100	20	30	451.8	17.50
101 234 076	76	312	304	120	20	30	463.9	18.38
101 234 080	80	328	320	120	20	30	514.1	20.00
101 234 090	90	368	360	120	20	30	629.6	25.20
101 234 096	96	392	384	120	20	30	669.2	28.50
101 234 100	120	408	400	120	20	30	695.5	31.00

## SPUR GEARS - STEEL

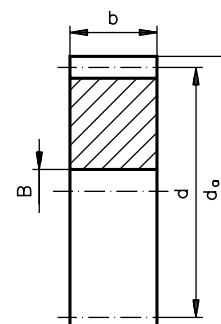
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 4.0

**Thickness (b)** : 30mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (kg)
101 244 020	20	88	80	20	32.1	1.07
101 244 024	24	104	96	20	46.2	1.59
101 244 025	25	108	100	20	50.2	1.73
101 244 030	30	128	120	25	72.2	2.49
101 244 035	35	148	140	25	98.4	3.44
101 244 036	36	152	144	25	104.1	3.55
101 244 037	37	156	148	25	109.9	3.86
101 244 038	38	160	152	25	115.9	4.04
101 244 040	40	168	160	25	128.5	4.55
101 244 042	42	176	168	25	141.6	5.02
101 244 045	45	188	180	25	162.6	5.78
101 244 046	46	192	184	25	169.9	6.08
101 244 047	47	196	188	25	177.4	6.34
101 244 048	48	200	192	25	185.0	6.62
101 244 050	50	208	200	25	200.8	7.18
101 244 052	52	216	208	25	217.2	7.78
101 244 056	56	232	224	25	251.9	9.06
101 244 060	60	248	240	25	289.1	10.42
101 244 065	65	268	260	30	339.3	12.19
101 244 067	67	276	268	30	360.5	12.99
101 244 070	70	288	280	30	393.6	14.14
101 244 076	76	312	304	30	463.9	17.00
101 244 080	80	328	320	30	514.1	18.50
101 244 090	90	368	360	30	629.6	23.50
101 244 096	96	392	384	30	669.2	26.89

## SPUR GEARS - STEEL

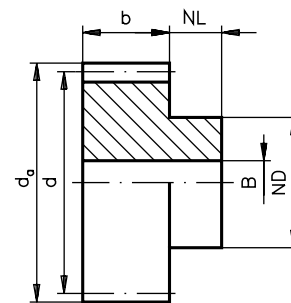
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 5.0

**Thickness (b)** : 40mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Nm)	Weight (kg)
101 235 012	12	70	60	40	25	15	24.0	0.99
101 235 013	13	75	65	40	25	15	28.2	1.14
101 235 014	14	80	70	50	25	15	32.8	1.45
101 235 015	15	85	75	60	25	15	37.6	1.79
101 235 016	16	90	80	60	25	15	42.8	1.98
101 235 017	17	95	85	60	25	20	48.3	2.11
101 235 018	18	100	90	60	25	20	54.2	2.33
101 235 019	19	105	95	60	25	20	60.4	2.55
101 235 020	20	110	100	60	25	20	66.9	2.78
101 235 021	21	115	105	60	25	20	73.8	3.03
101 235 022	22	120	110	60	25	20	80.9	3.30
101 235 023	23	125	115	60	25	20	88.5	3.57
101 235 024	24	130	120	80	25	20	96.3	4.29
101 235 025	25	135	125	80	25	20	104.5	4.59
101 235 026	26	140	130	80	25	25	113.1	4.80
101 235 027	27	145	135	80	25	25	121.9	5.13
101 235 028	28	150	140	80	25	25	131.2	5.47
101 235 030	30	160	150	80	25	25	150.6	6.18
101 235 032	32	170	160	80	30	25	171.3	7.14
101 235 035	35	185	175	80	30	25	205.0	8.36
101 235 036	36	190	180	100	30	25	216.8	9.45
101 235 038	38	200	190	100	30	25	241.6	10.33
101 235 040	40	210	200	100	30	25	267.7	11.30
101 235 045	45	235	225	100	30	25	338.8	13.87
101 235 048	48	250	240	100	30	30	385.5	15.44
101 235 050	50	260	250	120	30	30	418.3	17.50
101 235 052	52	270	260	120	30	30	452.5	18.75
101 235 055	55	285	275	150	30	30	506.2	22.00
101 235 056	56	290	280	150	30	30	524.8	23.00
101 235 060	60	310	300	160	30	30	602.4	26.50

## SPUR GEARS - STEEL

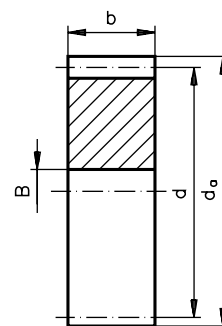
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 5.0

**Thickness (b)** : 40mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (kg)
101 245 020	20	110	100	20	66.9	2.29
101 245 025	25	135	125	25	104.5	3.61
101 245 030	30	160	150	25	150.6	5.29
101 245 035	35	185	175	25	205.0	7.27
101 245 036	36	190	180	25	216.8	7.71
101 245 038	38	200	190	25	241.6	8.63
101 245 040	40	210	200	25	267.7	9.57
101 245 045	45	235	225	25	338.8	12.15
101 245 048	48	250	240	30	385.5	13.02
101 245 050	50	260	250	30	418.3	13.59
101 245 052	52	270	260	30	452.5	16.28
101 245 056	56	290	280	30	524.8	18.85
101 245 060	60	310	300	30	602.4	22.00
101 245 065	65	335	325	30	707.0	25.50
101 245 070	70	360	350	30	820.0	30.00

## SPUR GEARS - STEEL

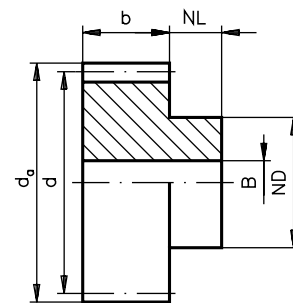
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 6.0

**Thickness (b)** : 50mm



Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $N_D$	Hub Length $N_L$	Bore $B$	Torque (Nm)	Weight (kg)
101 236 012	12	84	72	50	25	20	43.3	1.72
101 236 013	13	90	78	50	25	20	50.9	1.99
101 236 014	14	96	84	60	25	20	59.0	2.45
101 236 015	15	102	90	60	25	20	67.7	2.79
101 236 016	16	108	96	60	25	20	77.1	3.12
101 236 017	17	114	102	60	25	20	87.7	3.47
101 236 018	18	120	108	70	25	20	97.5	4.05
101 236 019	19	126	114	70	25	20	108.7	4.46
101 236 020	20	132	120	70	25	20	120.4	4.88
101 236 021	21	138	126	70	25	25	132.8	5.24
101 236 022	22	144	132	80	25	25	145.7	5.94
101 236 023	23	150	138	80	25	25	159.3	6.43
101 236 024	24	156	144	80	25	25	173.5	6.93
101 236 025	25	162	150	80	25	25	188.2	7.49
101 236 026	26	168	156	80	25	25	203.6	8.05
101 236 027	27	174	162	80	25	25	219.5	8.62
101 236 028	28	180	168	90	25	25	236.1	9.78
101 236 030	30	192	180	100	30	25	271.1	11.33
101 236 032	32	204	192	100	30	25	308.4	12.74
101 236 035	35	222	210	100	30	25	369.0	14.95
101 236 036	36	228	216	100	30	25	390.3	15.70
101 236 038	38	240	228	110	30	25	434.9	18.00
101 236 040	40	252	240	120	30	30	481.9	19.69
101 236 045	45	282	270	120	30	30	609.9	24.50
101 236 048	48	300	288	120	30	30	694.0	27.66
101 236 050	50	312	300	140	30	30	753.0	30.61
101 236 052	52	324	312	140	30	30	814.5	34.91
101 236 055	55	342	330	150	30	40	911.2	35.84
101 236 056	56	348	336	150	30	40	944.6	36.50
101 236 060	60	372	360	150	30	40	1084.4	43.00



## SPUR GEARS - STEEL

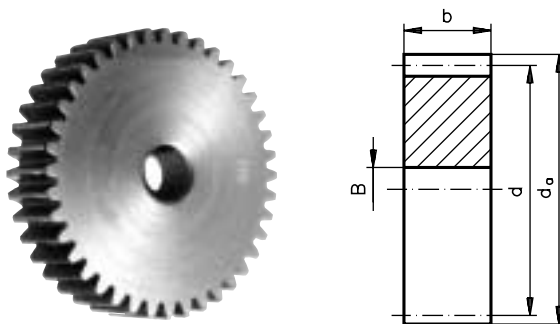
- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

High quality machined gears for industrial use.  
Manufactured to DIN 3967. Quality grade 8.

**Material** : Steel C45

**Module** : 6.0

**Thickness (b)** : 50mm

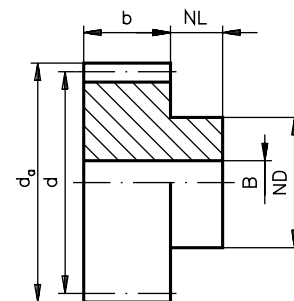


Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Bore $B$	Torque (Nm)	Weight (kg)
101 246 025	25	162	150	25	188.2	6.50
101 246 030	30	192	180	25	271.1	9.50
101 246 036	36	228	216	25	390.3	14.00
101 246 040	40	252	240	30	481.9	17.50
101 246 045	45	282	270	30	609.9	22.00
101 246 048	48	300	288	30	694.0	25.00
101 246 050	50	312	300	30	753.0	27.00
101 246 052	52	324	312	30	814.5	29.50
101 246 056	56	348	336	40	944.6	34.00
101 246 060	60	372	360	40	1084.4	39.00

## SPUR GEARS - STAINLESS STEEL

- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

Manufactured to DIN 3967 Quality grade 8



Material : Stainless Steel 1.4305, Module : 1.0, Thickness (b) : 10mm

Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Ncm)	Weight (g)
101 214 510	10	12	10	8	6	4	7.8	7
101 214 512	12	14	12	10	6	4	11.3	10
101 214 515	15	17	15	12	6	5	17.6	16
101 214 518	18	20	18	15	6	6	25.4	24
101 214 520	20	22	20	15	6	6	31.4	28
101 214 524	24	26	24	15	6	6	45.2	39
101 214 525	25	27	25	20	6	8	49.1	46
101 214 530	30	32	30	25	8	8	70.7	77
101 214 536	36	38	36	25	8	8	100.0	102
101 214 540	40	42	40	25	8	8	120.0	120
101 214 548	48	50	48	30	10	10	180.0	182
101 214 550	50	52	50	30	10	10	190.0	193
101 214 554	54	56	54	40	10	10	220.0	262
101 214 560	60	62	60	40	12	10	280.0	320
101 214 564	64	66	64	40	12	10	320.0	352
101 214 565	65	67	65	40	12	10	330.0	360
101 214 570	70	72	70	40	12	10	380.0	401
101 214 572	72	74	72	50	12	10	400.0	484
101 214 575	75	77	75	50	12	10	440.0	510
101 214 580	80	82	80	50	12	10	1070.0	560
101 214 600	100	102	100	60	12	12	1440.0	856
101 214 620	120	122	120	60	12	12	1730.0	1125

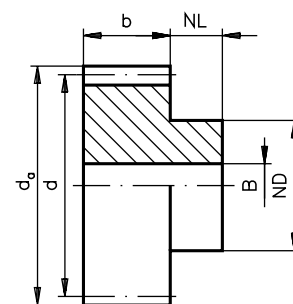
Material : Stainless Steel 1.4305, Module : 1.5, Thickness (b) : 15mm

Order Code	N (teeth)	Overall Dia $d_a$ (mm)	Pitch Dia $d$ (mm)	Hub Dia $ND$ (mm)	Hub Length $NL$ (mm)	Bore $B$ (mm)	Torque (Ncm)	Weight (g)
101 218 512	12	21	18	15	10	8	38.10	32
101 218 515	15	25.5	22.5	18	10	10	59.85	49
101 218 518	18	30	27	22	10	10	85.90	79
101 218 520	20	33	30	25	10	10	100.00	103
101 218 524	24	39	36	25	15	10	150.00	154
101 218 525	25	40.5	37.5	25	15	10	160.00	166
101 218 530	30	48	45	30	15	10	230.00	246
101 218 535	35	55.5	52.5	30	15	10	320.00	317
101 218 540	40	63	60	40	15	10	420.00	454
101 218 545	45	70.5	67.5	40	15	10	530.00	541
101 218 548	48	75	72	40	15	10	610.00	599
101 218 550	50	78	75	50	15	10	660.00	721
101 218 555	55	85.5	82.5	50	15	10	1700.00	831
101 218 560	60	93	90	60	15	12	2030.00	1041
101 218 565	65	100.5	97.5	60	15	12	2380.00	1172
101 218 570	70	108	105	60	20	12	2760.00	1423
101 218 580	80	123	120	70	20	15	3610.00	1878

## SPUR GEARS - STAINLESS STEEL

- Milled teeth, straight interlocking
- Bore tolerances to H7
- Pressure angle 20°

Manufactured to DIN 3967 Quality grade 8



**Material : Stainless Steel 1.4305, Module : 2.0, Thickness (b) : 16mm**

Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Nm)	Weight (g)
101 231 512	12	28	24	20	15	10	0.72	70
101 231 515	15	34	30	25	15	12	1.10	114
101 231 518	18	40	36	30	15	12	1.60	179
101 231 520	20	44	40	30	15	12	2.00	207
101 231 524	24	52	48	30	15	12	2.80	275
101 231 525	25	54	50	30	15	12	3.10	295
101 231 530	30	64	60	40	15	12	4.50	466
101 231 535	35	74	70	45	15	12	6.10	632
101 231 540	40	84	80	50	15	12	17.10	825
101 231 545	45	94	90	50	15	12	21.60	911
101 231 548	48	100	96	50	15	12	24.60	1098
101 231 550	50	104	100	50	15	12	26.70	1174
101 231 555	55	114	110	60	15	12	32.30	1485
101 231 560	60	124	120	70	15	12	38.50	1827

**Material : Stainless Steel 1.4305, Module : 3.0, Thickness (b) : 25mm**

Order Code	N (teeth)	Overall Dia $d_a$	Pitch Dia $d$	Hub Dia $ND$	Hub Length $NL$	Bore $B$	Torque (Nm)	Weight (g)
101 233 512	12	42	36	25	15	12	5.4	210
101 233 515	15	51	45	35	15	12	8.4	378
101 233 518	18	60	54	45	15	12	12.1	586
101 233 520	20	66	60	45	15	15	15	670
101 233 524	24	78	72	50	15	15	21.6	957
101 233 525	25	81	75	50	15	15	23.5	1019
101 233 530	30	96	90	50	15	20	33.8	1355
101 233 535	35	111	105	60	15	20	46.1	1904
101 233 540	40	126	120	70	20	20	60.2	2670
101 233 545	45	141	135	70	20	20	76.2	3263
101 233 548	48	150	144	80	20	20	86.7	3841
101 233 550	50	156	150	80	20	20	94.1	4101

HIGH QUALITY



BEST PRICE



EX-STOCK