

# Spur gears in steel, module 1

toothing milled, straight teeth, engagement angle 20°


**Material:**

Steel 1.0503 (C45).

**Version:**

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nlm 22400-0110150012

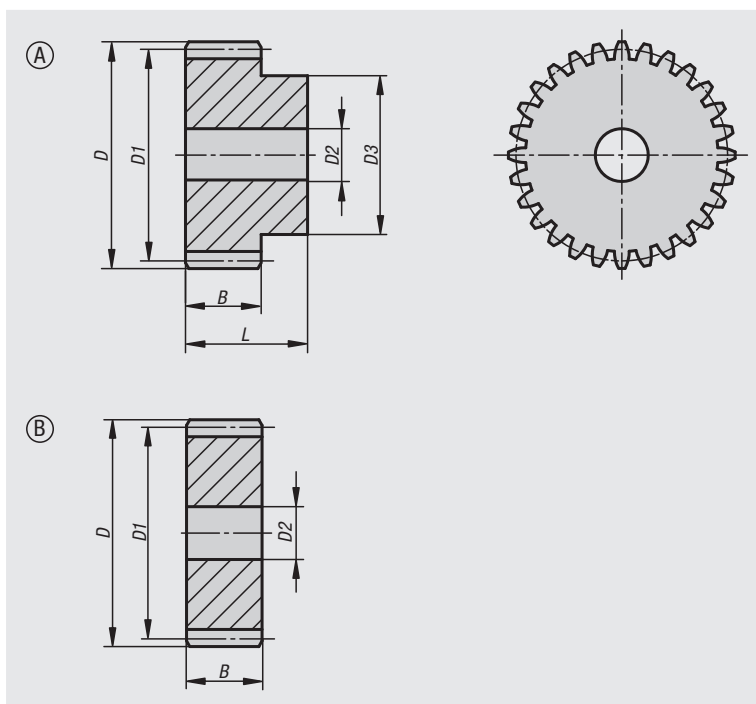
**Note:**

Up to 70 teeth with hub one side, from 72 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

**Drawing reference:**

Form A: with hub

Form B: without hub



Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0110150012	A	12	14	12	6	9	15	25
22400-0110150013	A	13	15	13	-	10	15	25
22400-0110150014	A	14	16	14	-	11	15	25
22400-0110150015	A	15	17	15	-	12	15	25
22400-0110150016	A	16	18	16	-	13	15	25
22400-0110150017	A	17	19	17	-	14	15	25
22400-0110150018	A	18	20	18	8	15	15	25
22400-0110150019	A	19	21	19	8	15	15	25
22400-0110150020	A	20	22	20	8	16	15	25
22400-0110150021	A	21	23	21	8	16	15	25
22400-0110150022	A	22	24	22	8	16	15	25
22400-0110150023	A	23	25	23	8	18	15	25
22400-0110150024	A	24	26	24	10	20	15	25
22400-0110150025	A	25	27	25	10	20	15	25
22400-0110150026	A	26	28	26	10	20	15	25
22400-0110150027	A	27	29	27	10	20	15	25
22400-0110150028	A	28	30	28	10	20	15	25
22400-0110150029	A	29	31	29	10	20	15	25
22400-0110150030	A	30	32	30	10	20	15	25
22400-0110150031	A	31	33	31	10	25	15	25
22400-0110150032	A	32	34	32	10	25	15	25
22400-0110150033	A	33	35	33	10	25	15	25
22400-0110150034	A	34	36	34	10	25	15	25
22400-0110150035	A	35	37	35	10	25	15	25
22400-0110150036	A	36	38	36	10	25	15	25
22400-0110150037	A	37	39	37	10	25	15	25
22400-0110150038	A	38	40	38	10	25	15	25

# Spur gears in steel, module 1

toothing milled, straight teeth, engagement angle 20°

Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0110150039	A	39	41	39	10	25	15	25
22400-0110150040	A	40	42	40	10	25	15	25
22400-0110150041	A	41	43	41	10	30	15	25
22400-0110150042	A	42	44	42	10	30	15	25
22400-0110150043	A	43	45	43	10	30	15	25
22400-0110150044	A	44	46	44	10	30	15	25
22400-0110150045	A	45	47	45	10	30	15	25
22400-0110150046	A	46	48	46	10	30	15	25
22400-0110150047	A	47	49	47	10	30	15	25
22400-0110150048	A	48	50	48	10	30	15	25
22400-0110150049	A	49	51	49	10	30	15	25
22400-0110150050	A	50	52	50	12	30	15	25
22400-0110150051	A	51	53	51	12	40	15	25
22400-0110150052	A	52	54	52	12	40	15	25
22400-0110150053	A	53	55	53	12	40	15	25
22400-0110150054	A	54	56	54	12	40	15	25
22400-0110150055	A	55	57	55	12	40	15	25
22400-0110150056	A	56	58	56	12	40	15	25
22400-0110150057	A	57	59	57	12	40	15	25
22400-0110150058	A	58	60	58	12	40	15	25
22400-0110150059	A	59	61	59	12	40	15	25
22400-0110150060	A	60	62	60	12	40	15	25
22400-0110150061	A	61	63	61	12	50	15	25
22400-0110150062	A	62	64	62	12	50	15	25
22400-0110150063	A	63	65	63	12	50	15	25
22400-0110150064	A	64	66	64	12	50	15	25
22400-0110150065	A	65	67	65	12	50	15	25
22400-0110150066	A	66	68	66	12	50	15	25
22400-0110150067	A	67	69	67	12	50	15	25
22400-0110150068	A	68	70	68	12	50	15	25
22400-0110150069	A	69	71	69	12	50	15	25
22400-0110150070	A	70	72	70	12	50	15	25

Order No.	Form	No. of teeth	D	D1	D2 max.	B
22400-0210150072	B	72	74	72	12	15
22400-0210150075	B	75	77	75	12	15
22400-0210150076	B	76	78	76	12	15
22400-0210150080	B	80	82	80	12	15
22400-0210150085	B	85	87	85	12	15
22400-0210150090	B	90	92	90	12	15
22400-0210150095	B	95	97	95	12	15
22400-0210150100	B	100	102	100	12	15
22400-0210150110	B	110	112	110	12	15
22400-0210150114	B	114	116	114	12	15
22400-0210150120	B	120	122	120	12	15
22400-0210150127	B	127	129	127	12	15

# Spur gears in steel, module 1.5

toothing milled, straight teeth, engagement angle 20°


**Material:**

Steel 1.0503 (C45).

**Version:**

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nlm 22400-0115170012

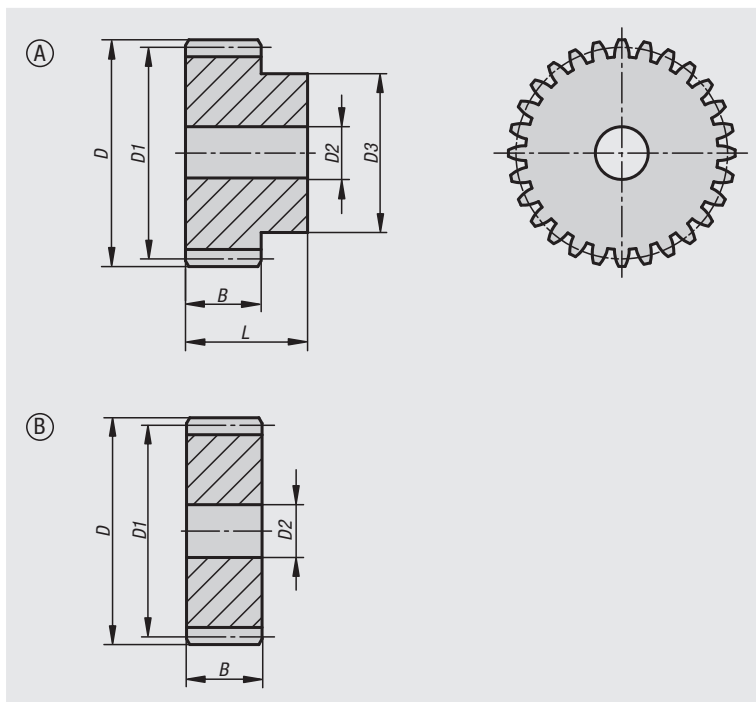
**Note:**

Up to 70 teeth with hub one side, from 72 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

**Drawing reference:**

Form A: with hub

Form B: without hub



Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0115170012	A	12	21	18	8	14	17	30
22400-0115170013	A	13	22,5	19,5	8	15	17	30
22400-0115170014	A	14	24	21	8	17	17	30
22400-0115170015	A	15	25,5	22,5	8	18	17	30
22400-0115170016	A	16	27	24	8	19	17	30
22400-0115170017	A	17	28,5	25,5	8	20	17	30
22400-0115170018	A	18	30	27	8	20	17	30
22400-0115170019	A	19	31,5	28,5	8	20	17	30
22400-0115170020	A	20	33	30	8	25	17	30
22400-0115170021	A	21	34,5	31,5	10	25	17	30
22400-0115170022	A	22	36	33	10	25	17	30
22400-0115170023	A	23	37,5	34,5	10	25	17	30
22400-0115170024	A	24	39	36	10	25	17	30
22400-0115170025	A	25	40,5	37,5	10	25	17	30
22400-0115170026	A	26	42	39	12	30	17	30
22400-0115170027	A	27	43,5	40,5	12	30	17	30
22400-0115170028	A	28	45	42	12	30	17	30
22400-0115170029	A	29	46,5	43,5	12	30	17	30
22400-0115170030	A	30	48	45	12	30	17	30
22400-0115170031	A	31	49,5	46,5	12	35	17	30
22400-0115170032	A	32	51	48	12	35	17	30
22400-0115170033	A	33	52,5	49,5	12	35	17	30
22400-0115170034	A	34	54	51	12	35	17	30
22400-0115170035	A	35	55,5	52,5	12	35	17	30
22400-0115170036	A	36	57	54	12	35	17	30
22400-0115170037	A	37	58,5	55,5	12	40	17	30
22400-0115170038	A	38	60	57	12	40	17	30

# Spur gears in steel, module 1.5

toothing milled, straight teeth, engagement angle 20°

Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0115170039	A	39	61,5	58,5	12	40	17	30
22400-0115170040	A	40	63	60	12	40	17	30
22400-0115170041	A	41	64,5	61,5	12	40	17	30
22400-0115170042	A	42	66	63	12	50	17	30
22400-0115170043	A	43	67,5	64,5	12	50	17	30
22400-0115170044	A	44	69	66	12	50	17	30
22400-0115170045	A	45	70,5	67,5	12	50	17	30
22400-0115170046	A	46	72	69	14	50	17	30
22400-0115170047	A	47	73,5	70,5	14	50	17	30
22400-0115170048	A	48	75	72	14	50	17	30
22400-0115170049	A	49	76,5	73,5	14	50	17	30
22400-0115170050	A	50	78	75	14	50	17	30
22400-0115170051	A	51	79,5	76,5	14	60	17	30
22400-0115170052	A	52	81	78	14	60	17	30
22400-0115170053	A	53	82,5	79,5	14	60	17	30
22400-0115170054	A	54	84	81	14	60	17	30
22400-0115170055	A	55	85,5	82,5	14	60	17	30
22400-0115170056	A	56	87	84	20	60	17	30
22400-0115170057	A	57	88,5	85,5	20	60	17	30
22400-0115170058	A	58	90	87	20	60	17	30
22400-0115170059	A	59	91,5	88,5	20	60	17	30
22400-0115170060	A	60	93	90	20	60	17	30
22400-0115170061	A	61	94,5	91,5	20	70	17	30
22400-0115170062	A	62	96	93	20	70	17	30
22400-0115170063	A	63	97,5	94,5	20	70	17	30
22400-0115170064	A	64	99	96	20	70	17	30
22400-0115170065	A	65	100,5	97,5	20	70	17	30
22400-0115170066	A	66	102	99	20	70	17	30
22400-0115170067	A	67	103,5	100,5	20	70	17	30
22400-0115170068	A	68	105	102	20	70	17	30
22400-0115170069	A	69	106,5	103,5	20	70	17	30
22400-0115170070	A	70	108	105	20	70	17	30

Order No.	Form	No. of teeth	D	D1	D2 max.	B
22400-0215170072	B	72	111	108	20	17
22400-0215170075	B	75	115,5	112,5	20	17
22400-0215170076	B	76	117	114	20	17
22400-0215170080	B	80	123	120	20	17
22400-0215170085	B	85	130,5	127,5	20	17
22400-0215170090	B	90	138	135	20	17
22400-0215170095	B	95	145,5	142,5	20	17
22400-0215170100	B	100	153	150	20	17
22400-0215170110	B	110	168	165	20	17
22400-0215170114	B	114	174	171	20	17
22400-0215170120	B	120	183	180	20	17
22400-0215170127	B	127	193,5	190,5	20	17

## Spur gears in steel, module 2

toothing milled, straight teeth, engagement angle 20°


**Material:**

Steel 1.0503 (C45).

**Version:**

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nlm 22400-0120200012

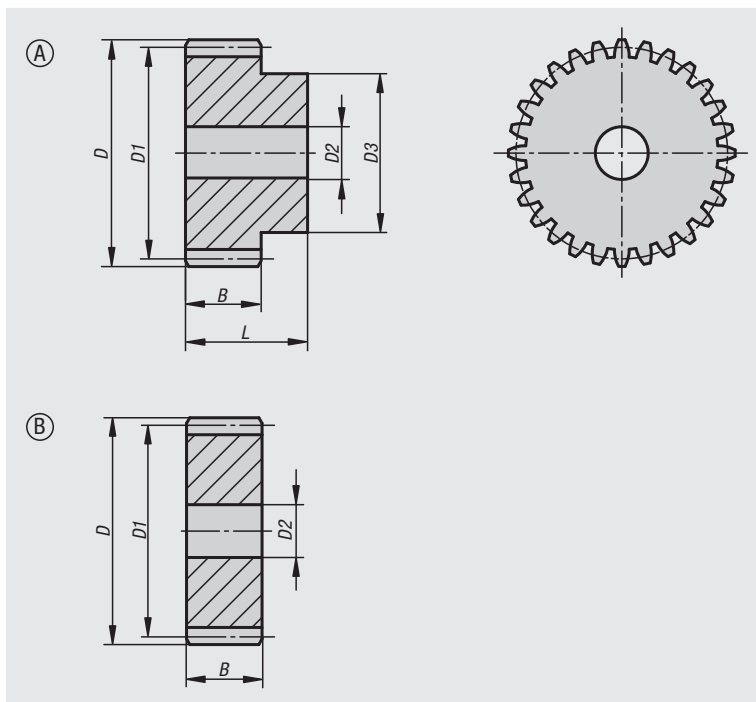
**Note:**

Up to 70 teeth with hub one side, from 72 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

**Drawing reference:**

Form A: with hub

Form B: without hub



Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0120200012	A	12	28	24	10	18	20	35
22400-0120200013	A	13	30	26	10	20	20	35
22400-0120200014	A	14	32	28	10	22	20	35
22400-0120200015	A	15	34	30	10	24	20	35
22400-0120200016	A	16	36	32	10	25	20	35
22400-0120200017	A	17	38	34	10	25	20	35
22400-0120200018	A	18	40	36	10	25	20	35
22400-0120200019	A	19	42	38	10	25	20	35
22400-0120200020	A	20	44	40	10	30	20	35
22400-0120200021	A	21	46	42	12	30	20	35
22400-0120200022	A	22	48	44	12	30	20	35
22400-0120200023	A	23	50	46	12	30	20	35
22400-0120200024	A	24	52	48	12	35	20	35
22400-0120200025	A	25	54	50	12	35	20	35
22400-0120200026	A	26	56	52	12	40	20	35
22400-0120200027	A	27	58	54	12	40	20	35
22400-0120200028	A	28	60	56	12	40	20	35
22400-0120200029	A	29	62	58	14	40	20	35
22400-0120200030	A	30	64	60	14	40	20	35
22400-0120200031	A	31	66	62	14	45	20	35
22400-0120200032	A	32	68	64	14	45	20	35
22400-0120200033	A	33	70	66	14	45	20	35
22400-0120200034	A	34	72	68	14	45	20	35
22400-0120200035	A	35	74	70	14	45	20	35
22400-0120200036	A	36	76	72	14	45	20	35
22400-0120200037	A	37	78	74	14	50	20	35
22400-0120200038	A	38	80	76	14	50	20	35

# Spur gears in steel, module 2

toothing milled, straight teeth, engagement angle 20°

Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0120200039	A	39	82	78	14	50	20	35
22400-0120200040	A	40	84	80	14	50	20	35
22400-0120200041	A	41	86	82	20	55	20	35
22400-0120200042	A	42	88	84	20	55	20	35
22400-0120200043	A	43	90	86	20	55	20	35
22400-0120200044	A	44	92	88	20	60	20	35
22400-0120200045	A	45	94	90	20	60	20	35
22400-0120200046	A	46	96	92	20	60	20	35
22400-0120200047	A	47	98	94	20	70	20	35
22400-0120200048	A	48	100	96	20	70	20	35
22400-0120200049	A	49	102	98	20	70	20	35
22400-0120200050	A	50	104	100	20	70	20	35
22400-0120200051	A	51	106	102	20	70	20	35
22400-0120200052	A	52	108	104	20	70	20	35
22400-0120200053	A	53	110	106	20	70	20	35
22400-0120200054	A	54	112	108	20	70	20	35
22400-0120200055	A	55	114	110	20	70	20	35
22400-0120200056	A	56	116	112	20	70	20	35
22400-0120200057	A	57	118	114	20	70	20	35
22400-0120200058	A	58	120	116	20	70	20	35
22400-0120200059	A	59	122	118	20	70	20	35
22400-0120200060	A	60	124	120	20	70	20	35
22400-0120200061	A	61	126	122	20	80	20	35
22400-0120200062	A	62	128	124	20	80	20	35
22400-0120200063	A	63	130	126	20	80	20	35
22400-0120200064	A	64	132	128	20	80	20	35
22400-0120200065	A	65	134	130	20	80	20	35
22400-0120200066	A	66	136	132	20	80	20	35
22400-0120200067	A	67	138	134	20	80	20	35
22400-0120200068	A	68	140	136	20	80	20	35
22400-0120200069	A	69	142	138	20	80	20	35
22400-0120200070	A	70	144	140	20	80	20	35

Order No.	Form	No. of teeth	D	D1	D2 max.	B
22400-0220200072	B	72	148	144	20	20
22400-0220200075	B	75	154	150	20	20
22400-0220200076	B	76	156	152	20	20
22400-0220200080	B	80	164	160	20	20
22400-0220200085	B	85	174	170	20	20
22400-0220200090	B	90	184	180	20	20
22400-0220200095	B	95	194	190	20	20
22400-0220200100	B	100	204	200	20	20
22400-0220200110	B	110	224	220	20	20
22400-0220200114	B	114	232	228	20	20
22400-0220200120	B	120	244	240	20	20
22400-0220200127	B	127	258	254	20	20

# Spur gears in steel, module 2.5

toothing milled, straight teeth, engagement angle 20°


**Material:**

Steel 1.0503 (C45).

**Version:**

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nIm 22400-0125250012

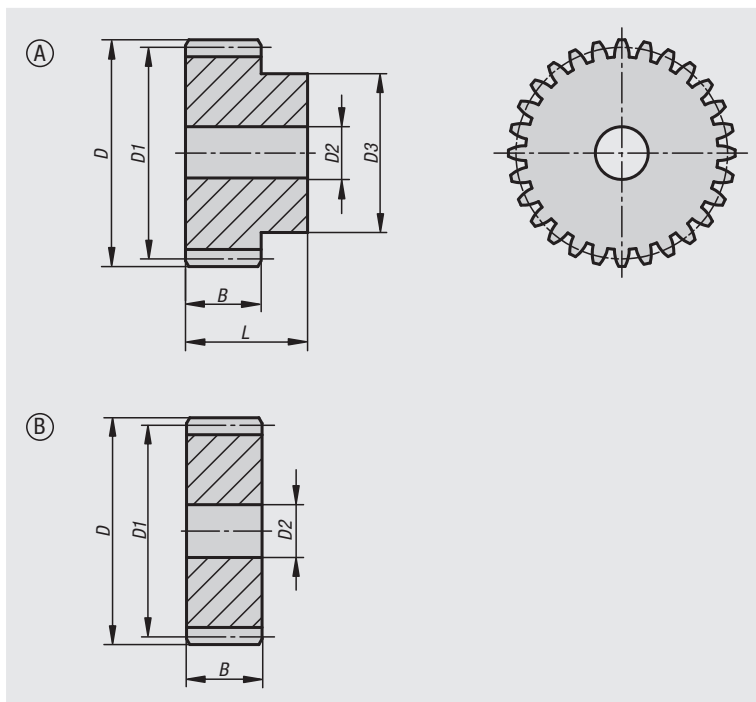
**Note:**

Up to 60 teeth with hub one side, from 65 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

**Drawing reference:**

Form A: with hub

Form B: without hub



Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0125250012	A	12	35	30	10	22	25	45
22400-0125250013	A	13	37,5	32,5	10	25	25	45
22400-0125250014	A	14	40	35	10	28	25	45
22400-0125250015	A	15	42,5	37,5	10	30	25	45
22400-0125250016	A	16	45	40	12	32	25	45
22400-0125250017	A	17	47,5	42,5	12	35	25	45
22400-0125250018	A	18	50	45	12	35	25	45
22400-0125250019	A	19	52,5	47,5	12	35	25	45
22400-0125250020	A	20	55	50	12	40	25	45
22400-0125250021	A	21	57,5	52,5	14	40	25	45
22400-0125250022	A	22	60	55	14	45	25	45
22400-0125250023	A	23	62,5	57,5	14	45	25	45
22400-0125250024	A	24	65	60	14	45	25	45
22400-0125250025	A	25	67,5	62,5	14	50	25	45
22400-0125250026	A	26	70	65	14	50	25	45
22400-0125250027	A	27	72,5	67,5	14	50	25	45
22400-0125250028	A	28	75	70	14	50	25	45
22400-0125250029	A	29	77,5	72,5	14	50	25	45
22400-0125250030	A	30	80	75	14	55	25	45

# Spur gears in steel, module 2.5

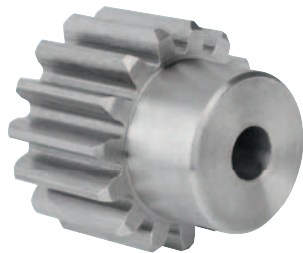
toothing milled, straight teeth, engagement angle 20°

Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0125250031	A	31	82,5	77,5	20	55	25	45
22400-0125250032	A	32	85	80	20	55	25	45
22400-0125250033	A	33	87,5	82,5	20	55	25	45
22400-0125250034	A	34	90	85	20	55	25	45
22400-0125250035	A	35	92,5	87,5	20	60	25	45
22400-0125250036	A	36	95	90	20	60	25	45
22400-0125250037	A	37	97,5	92,5	20	60	25	45
22400-0125250038	A	38	100	95	20	60	25	45
22400-0125250039	A	39	102,5	97,5	20	60	25	45
22400-0125250040	A	40	105	100	20	70	25	45
22400-0125250041	A	41	107,5	102,5	20	70	25	45
22400-0125250042	A	42	110	105	20	70	25	45
22400-0125250043	A	43	112,5	107,5	20	70	25	45
22400-0125250044	A	44	115	110	20	70	25	45
22400-0125250045	A	45	117,5	112,5	20	70	25	45
22400-0125250046	A	46	120	115	20	70	25	45
22400-0125250047	A	47	122,5	117,5	20	80	25	45
22400-0125250048	A	48	125	120	20	80	25	45
22400-0125250049	A	49	127,5	122,5	20	80	25	45
22400-0125250050	A	50	130	125	20	80	25	45
22400-0125250051	A	51	132,5	127,5	20	80	25	45
22400-0125250052	A	52	135	130	20	90	25	45
22400-0125250053	A	53	137,5	132,5	20	90	25	45
22400-0125250054	A	54	140	135	20	90	25	45
22400-0125250055	A	55	142,5	137,5	20	90	25	45
22400-0125250056	A	56	145	140	20	100	25	45
22400-0125250057	A	57	147,5	142,5	20	100	25	45
22400-0125250058	A	58	150	145	20	100	25	45
22400-0125250059	A	59	152,5	147,5	20	100	25	45
22400-0125250060	A	60	155	150	20	100	25	45

Order No.	Form	No. of teeth	D	D1	D2 max.	B
22400-0225250065	B	65	167,5	162,5	20	25
22400-0225250070	B	70	180	175	20	25
22400-0225250072	B	72	185	180	20	25
22400-0225250075	B	75	192,5	187,5	20	25
22400-0225250076	B	76	195	190	20	25
22400-0225250080	B	80	205	200	25	25
22400-0225250085	B	85	217,5	212,5	25	25
22400-0225250090	B	90	230	225	25	25
22400-0225250095	B	95	242,5	237,5	25	25
22400-0225250100	B	100	255	250	25	25
22400-0225250110	B	110	280	275	25	25
22400-0225250114	B	114	290	285	25	25
22400-0225250120	B	120	305	300	25	25
22400-0225250127	B	127	322,5	317,5	25	25

## Spur gears in steel, module 3

toothing milled, straight teeth, engagement angle 20°



### Material:

Steel 1.0503 (C45).

### Version:

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

### Sample order:

nIm 22400-0130300012

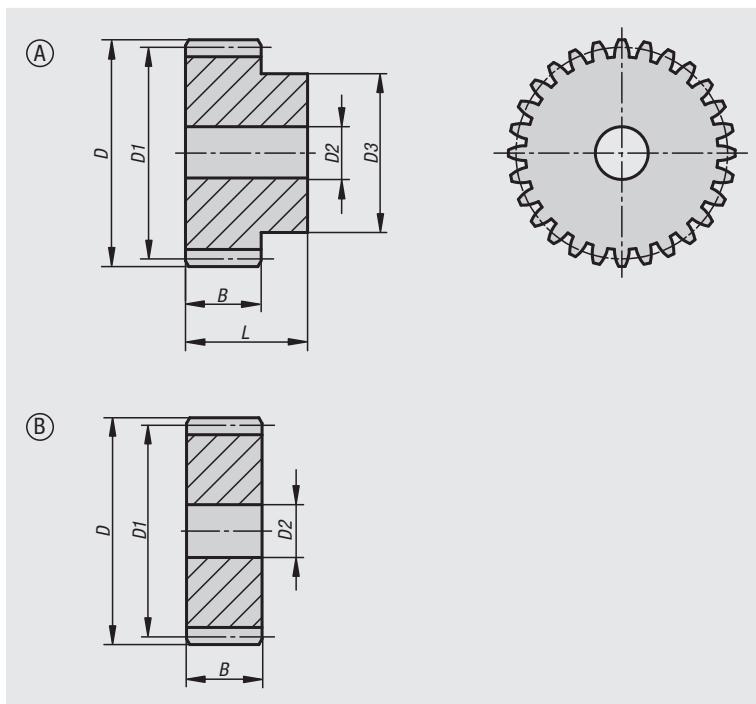
### Note:

Up to 48 teeth with hub one side, from 50 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

### Drawing reference:

Form A: with hub

Form B: without hub



Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0130300012	A	12	42	36	12	27	30	50
22400-0130300013	A	13	45	39	12	30	30	50
22400-0130300014	A	14	48	42	12	33	30	50
22400-0130300015	A	15	51	45	12	35	30	50
22400-0130300016	A	16	54	48	14	38	30	50
22400-0130300017	A	17	57	51	14	42	30	50
22400-0130300018	A	18	60	54	14	45	30	50
22400-0130300019	A	19	63	57	14	45	30	50
22400-0130300020	A	20	66	60	14	45	30	50
22400-0130300021	A	21	69	63	20	45	30	50
22400-0130300022	A	22	72	66	20	50	30	50
22400-0130300023	A	23	75	69	20	50	30	50
22400-0130300024	A	24	78	72	20	50	30	50

# Spur gears in steel, module 3

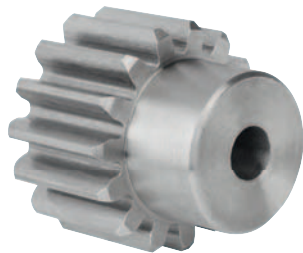
toothing milled, straight teeth, engagement angle 20°

Order No.	Form	No. of teeth	D	D1	D2 max.	D3	B	L
22400-0130300025	A	25	81	75	20	60	30	50
22400-0130300026	A	26	84	78	20	60	30	50
22400-0130300027	A	27	87	81	20	60	30	50
22400-0130300028	A	28	90	84	20	60	30	50
22400-0130300029	A	29	93	87	20	60	30	50
22400-0130300030	A	30	96	90	20	60	30	50
22400-0130300031	A	31	99	93	20	60	30	50
22400-0130300032	A	32	102	96	20	70	30	50
22400-0130300033	A	33	105	99	20	70	30	50
22400-0130300034	A	34	108	102	20	70	30	50
22400-0130300035	A	35	111	105	20	70	30	50
22400-0130300036	A	36	114	108	20	70	30	50
22400-0130300037	A	37	117	111	20	70	30	50
22400-0130300038	A	38	120	114	20	80	30	50
22400-0130300039	A	39	123	117	20	80	30	50
22400-0130300040	A	40	126	120	20	80	30	50
22400-0130300041	A	41	129	123	20	80	30	50
22400-0130300042	A	42	132	126	20	80	30	50
22400-0130300043	A	43	135	129	20	80	30	50
22400-0130300044	A	44	138	132	20	90	30	50
22400-0130300045	A	45	141	135	20	90	30	50
22400-0130300046	A	46	144	138	20	90	30	50
22400-0130300047	A	47	147	141	20	100	30	50
22400-0130300048	A	48	150	144	20	100	30	50

Order No.	Form	No. of teeth	D	D1	D2 max.	B
22400-0230300050	B	50	156	150	20	30
22400-0230300052	B	52	162	156	20	30
22400-0230300055	B	55	171	165	20	30
22400-0230300057	B	57	177	171	20	30
22400-0230300060	B	60	186	180	20	30
22400-0230300065	B	65	201	195	20	30
22400-0230300070	B	70	216	210	25	30
22400-0230300072	B	72	222	216	25	30
22400-0230300075	B	75	231	225	25	30
22400-0230300076	B	76	234	228	25	30
22400-0230300080	B	80	246	240	25	30
22400-0230300085	B	85	261	255	25	30
22400-0230300090	B	90	276	270	25	30
22400-0230300095	B	95	291	285	25	30
22400-0230300100	B	100	306	300	25	30
22400-0230300110	B	110	336	330	25	30
22400-0230300114	B	114	348	342	30	30
22400-0230300120	B	120	366	360	30	30
22400-0230300127	B	127	387	381	30	30

## Spur gears in steel, module 4

toothing milled, straight teeth, engagement angle 20°



**Material:**

Steel 1.0503 (C45).

**Version:**

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nIm 22400-0140400013

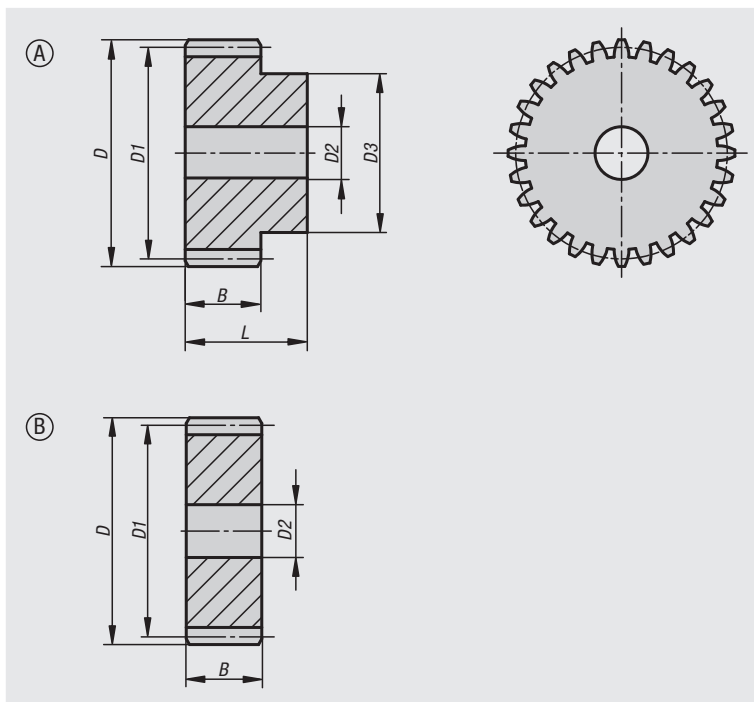
**Note:**

Up to 36 teeth with hub one side, from 38 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension  $D2$  max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

**Drawing reference:**

Form A: with hub

Form B: without hub



## Spur gears in steel, module 4

toothing milled, straight teeth, engagement angle 20°



Order No.	Form	B	D	D1	D2 max.	D3	L	Module	No. of teeth
22400-0140400012	A	40	56	48	14	35	60	4	12
22400-0140400013	A	40	60	52	14	40	60	4	13
22400-0140400014	A	40	64	56	14	45	60	4	14
22400-0140400015	A	40	68	60	14	45	60	4	15
22400-0140400016	A	40	72	64	16	50	60	4	16
22400-0140400017	A	40	76	68	16	50	60	4	17
22400-0140400018	A	40	80	72	16	50	60	4	18
22400-0140400019	A	40	84	76	16	60	60	4	19
22400-0140400020	A	40	88	80	16	60	60	4	20
22400-0140400021	A	40	92	84	16	70	60	4	21
22400-0140400022	A	40	96	88	16	70	60	4	22
22400-0140400023	A	40	100	92	20	75	60	4	23
22400-0140400024	A	40	104	96	20	75	60	4	24
22400-0140400025	A	40	108	100	20	75	60	4	25
22400-0140400026	A	40	112	104	20	75	60	4	26
22400-0140400027	A	40	116	108	20	75	60	4	27
22400-0140400028	A	40	120	112	20	75	60	4	28
22400-0140400029	A	40	124	116	20	75	60	4	29
22400-0140400030	A	40	128	120	20	75	60	4	30
22400-0140400031	A	40	132	124	20	80	60	4	31
22400-0140400032	A	40	136	128	20	80	60	4	32
22400-0140400033	A	40	140	132	20	80	60	4	33
22400-0140400034	A	40	144	136	20	80	60	4	34
22400-0140400035	A	40	148	140	20	80	60	4	35
22400-0140400036	A	40	152	144	25	80	60	4	36

Order No.	Form	B	D	D1	D2 max.	Module	No. of teeth
22400-0240400038	B	40	160	152	25	4	38
22400-0240400040	B	40	168	160	25	4	40
22400-0240400045	B	40	188	180	25	4	45
22400-0240400048	B	40	200	192	25	4	48
22400-0240400050	B	40	208	200	25	4	50
22400-0240400052	B	40	216	208	25	4	52
22400-0240400055	B	40	228	220	25	4	55
22400-0240400057	B	40	236	228	25	4	57
22400-0240400060	B	40	248	240	25	4	60
22400-0240400065	B	40	268	260	25	4	65
22400-0240400070	B	40	288	280	25	4	70
22400-0240400075	B	40	308	300	25	4	75
22400-0240400076	B	40	312	304	30	4	76
22400-0240400080	B	40	328	320	30	4	80
22400-0240400085	B	40	348	340	30	4	85
22400-0240400090	B	40	368	360	30	4	90
22400-0240400095	B	40	388	380	30	4	95
22400-0240400100	B	40	408	400	30	4	100
22400-0240400110	B	40	448	440	30	4	110
22400-0240400114	B	40	464	456	30	4	114

## Spur gears in steel, module 5

toothing milled, straight teeth, engagement angle 20°



**Material:**

Steel 1.0503 (C45).

**Version:**

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nIm 22400-0150500012

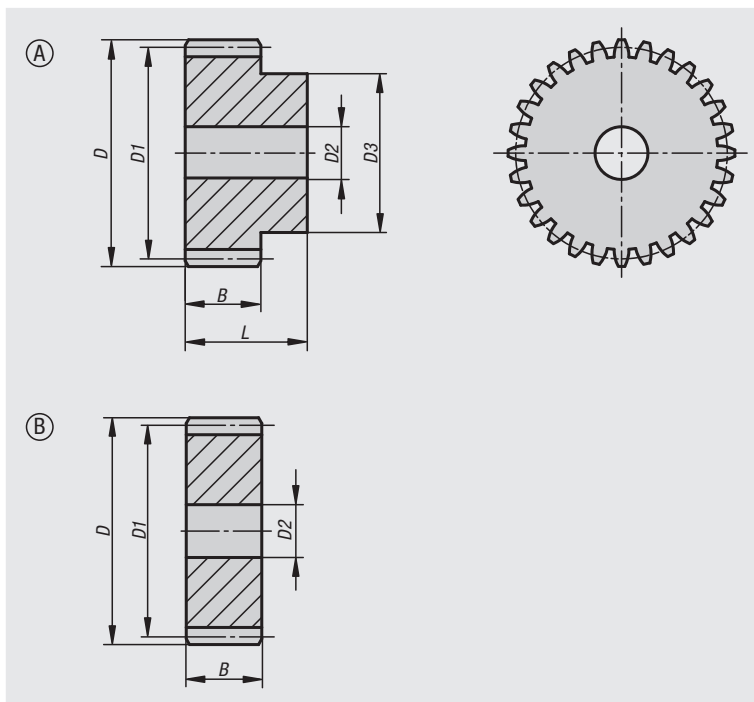
**Note:**

Up to 30 teeth with hub one side, from 32 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

**Drawing reference:**

Form A: with hub

Form B: without hub



# Spur gears in steel, module 5

toothing milled, straight teeth, engagement angle 20°



Order No.	Form	B	D	D1	D2 max.	D3	L	Module	No. of teeth
22400-0150500012	A	50	70	60	20	45	75	5	12
22400-0150500013	A	50	75	65	20	50	75	5	13
22400-0150500014	A	50	80	70	20	55	75	5	14
22400-0150500015	A	50	85	75	20	60	75	5	15
22400-0150500016	A	50	90	80	20	65	75	5	16
22400-0150500017	A	50	95	85	20	70	75	5	17
22400-0150500018	A	50	100	90	20	70	75	5	18
22400-0150500019	A	50	105	95	20	70	75	5	19
22400-0150500020	A	50	110	100	20	80	75	5	20
22400-0150500021	A	50	115	105	20	80	75	5	21
22400-0150500022	A	50	120	110	20	80	75	5	22
22400-0150500023	A	50	125	115	20	90	75	5	23
22400-0150500024	A	50	130	120	20	90	75	5	24
22400-0150500025	A	50	135	125	20	90	75	5	25
22400-0150500026	A	50	140	130	20	100	75	5	26
22400-0150500027	A	50	145	135	20	100	75	5	27
22400-0150500028	A	50	150	140	25	100	75	5	28
22400-0150500029	A	50	155	145	25	110	75	5	29
22400-0150500030	A	50	160	150	25	110	75	5	30

Order No.	Form	B	D	D1	D2 max.	Module	No. of teeth
22400-0250500032	B	50	170	160	25	5	32
22400-0250500035	B	50	185	175	25	5	35
22400-0250500038	B	50	200	190	25	5	38
22400-0250500040	B	50	210	200	25	5	40
22400-0250500045	B	50	235	225	25	5	45
22400-0250500048	B	50	250	240	25	5	48
22400-0250500050	B	50	260	250	30	5	50
22400-0250500052	B	50	270	260	30	5	52
22400-0250500055	B	50	285	275	30	5	55
22400-0250500057	B	50	295	285	30	5	57
22400-0250500060	B	50	310	300	30	5	60
22400-0250500065	B	50	335	325	30	5	65
22400-0250500070	B	50	360	350	30	5	70
22400-0250500075	B	50	385	375	30	5	75
22400-0250500076	B	50	390	380	30	5	76
22400-0250500080	B	50	410	400	30	5	80
22400-0250500085	B	50	435	425	30	5	85
22400-0250500090	B	50	460	450	30	5	90
22400-0250500095	B	50	485	475	30	5	95
22400-0250500100	B	50	510	500	30	5	100
22400-0250500110	B	50	560	550	30	5	110
22400-0250500114	B	50	580	570	30	5	114

# Spur gears in steel, module 6

toothing milled, straight teeth, engagement angle 20°



### Material:

Steel 1.0503 (C45).

### Version:

Milled toothing, straight teeth.  
Engagement angle 20°, bright.

### Sample order:

nIm 22400-0160600012

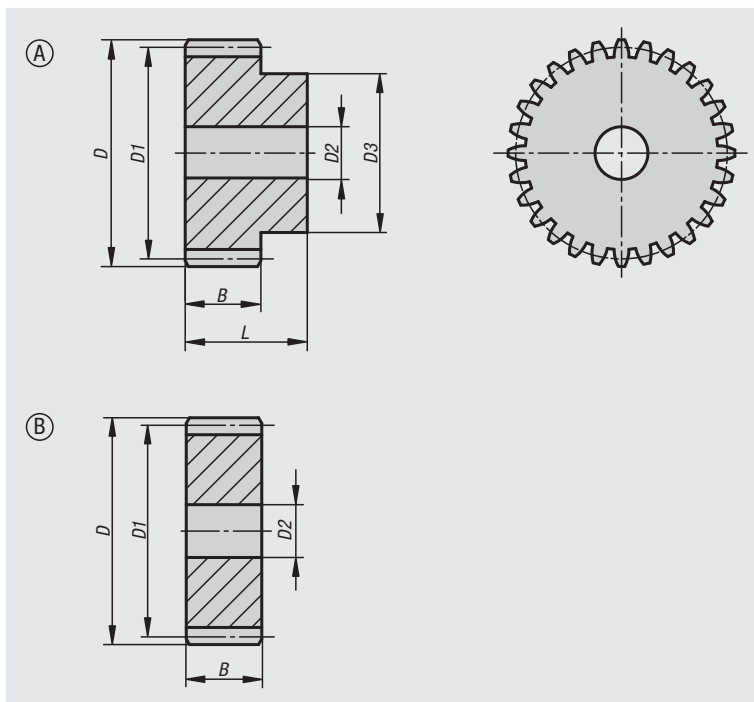
### Note:

Up to 25 teeth with hub one side, from 28 teeth supplied as disc form. The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.

### Drawing reference:

Form A: with hub

Form B: without hub

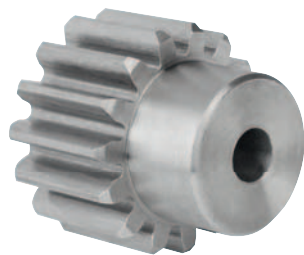


Order No.	Form	B	D	D1	D2 max.	D3	L	No. of teeth
22400-0160600012	A	60	84	72	20	54	80	12
22400-0160600013	A	60	90	78	20	60	80	13
22400-0160600015	A	60	102	90	20	70	80	15
22400-0160600016	A	60	108	95	20	75	80	16
22400-0160600018	A	60	120	108	20	80	80	18
22400-0160600020	A	60	132	120	20	90	80	20
22400-0160600024	A	60	156	144	25	110	80	24
22400-0160600025	A	60	162	150	25	110	80	25

Order No.	Form	B	D	D1	D2 max.	No. of teeth
22400-0260600028	B	60	180	168	25	28
22400-0260600030	B	60	192	180	25	30
22400-0260600032	B	60	204	192	25	32
22400-0260600035	B	60	222	210	25	35
22400-0260600038	B	60	240	228	25	38
22400-0260600040	B	60	252	240	25	40

# Spur gears in steel, module 8

toothing milled, straight teeth, engagement angle 20°


**Material:**

Steel 1.0503 (C45).

**Version:**

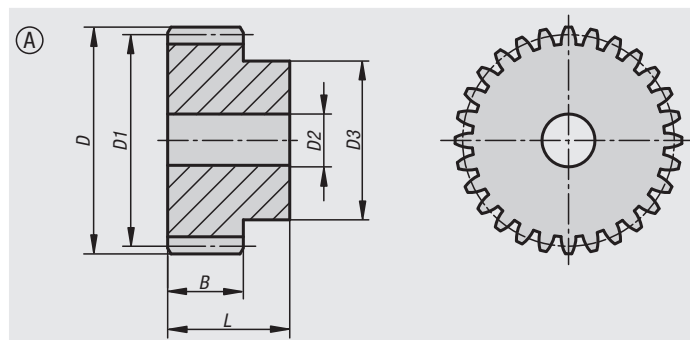
Milled toothing, straight teeth.  
Engagement angle 20°, bright.

**Sample order:**

nIm 22400-0180800015

**Note:**

With a hub one side The spur gears have a centre bore or pilot hole (this can vary due to manufacturing methods). For this reason, the dimension D2 max. given in the table is the maximum diameter of the bore with which the spur gears are supplied. This pilot/centre bore can be amended by the customer to produce a reamed bore, reamed bore with keyway or a tapped hole. Alternatively, customers can also use bushes to reduce the bore diameter.



Order No.	B	D	D1	D2 max.	D3	L	Module	No. of teeth
22400-0180800015	80	136	120	25	90	110	8	15
22400-0180800018	80	160	144	25	100	110	8	18
22400-0180800020	80	176	160	30	120	110	8	20
22400-0180800024	80	208	192	30	150	110	8	24
22400-0180800025	80	216	200	30	150	110	8	25
22400-0180800030	80	256	240	30	190	110	8	30