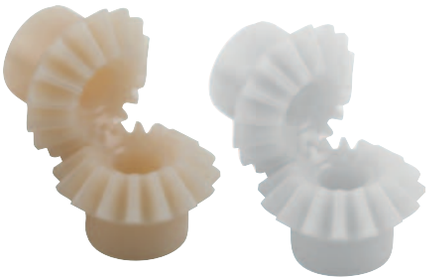
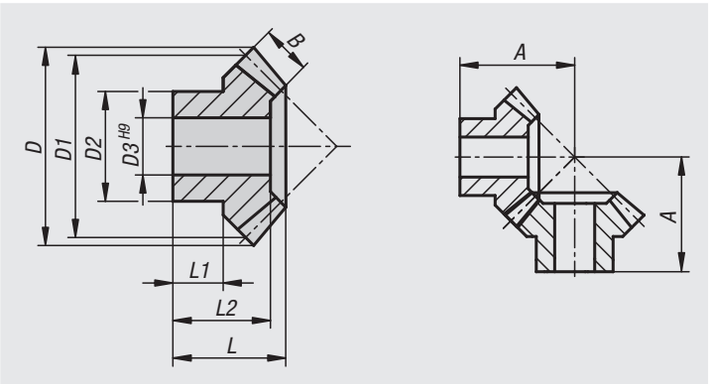
Bevel gears, plastic, ratio 1:1

injection-moulded, straight teeth, engagement angle 20°





Material:
Polyacetal (POM) or polyketone (PK).

Version:
Injection moulded, straight teeth. Engagement angle 20°. Axis angle = 90°.
Machined bores from module 1.5.
Polyacetal, white.
Polyketone, ivory tone.

Sample order:
nlm 22432-105110016

Note:
Polyacetal: Standard material with high hardness grade and low coefficient of friction.

Polyketone: Material with significantly longer service life, higher power transmission and greater security against tooth breakage due to the extraordinarily high wear resistance and very good tribological properties.

Can be used under water and other media.

Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

Bevel gear wheels are supplied as single components. To obtain a pair of bevel gear wheels, please order the specified mating gear as well.

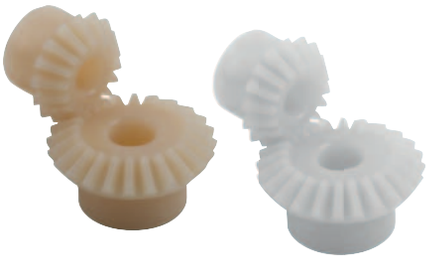
Temperature range:
-40 °C to +140 °C (taking amount and duration of load into account).

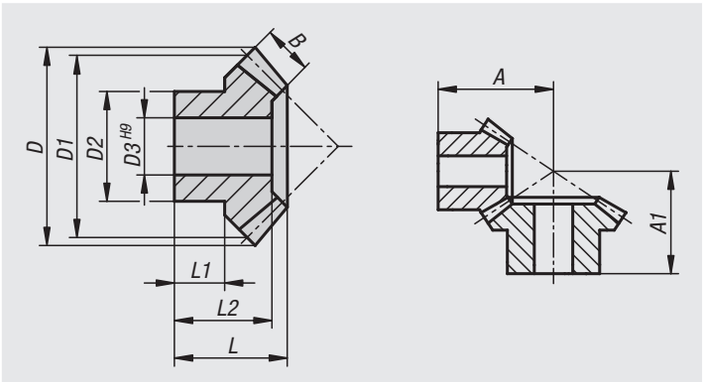
Attention:
The torques specified in the tables relate exclusively to the toothing. The shaft diameter, key size, etc. are not taken into account. The permissible load calculations are based on the basic principles of the pitting load capacity of the tooth flanks as well as the occurring tooth root stress. The respective permissible load of a gear wheel depends on so many different factors that the values specified can only be reference values meant to make selection easier. The torque specifications relate to a single tooth. The overlap, which is essential for determining the transmissible torque, occurs depending on the pitch diameter, gear wheel pairing, etc. In the simplest straight tooth cases, an overlap ratio of 1.1 to 1.25 is normal. To increase the overlap, a higher number of teeth with smaller modules is used. A good profile overlap can minimise damage such as pitting.

Order No.	Main material	Transmission ratio	Module	No. of teeth	A	B	D	D1	D2	D3	L	L1	L2	Max. torque Ncm	matching opposing gear
22432-105110016	polyacetal	1:1	0,5	16	10,5	2	8,7	8	7	3	8,1	6	8,1	1	22432-105110016
22432-110110016	polyacetal	1:1	1	16	18,4	4,7	17,6	16	12	5	13,6	8	13,6	9,4	22432-110110016
22432-110110030	polyacetal	1:1	1	30	25,1	7	31	30	15	6	15,4	7,6	13,3	26,3	22432-110110030
22432-115110016	polyacetal	1:1	1,5	16	25,8	7	26,4	24	18,5	8	18,4	10	16,2	31,6	22432-115110016
22432-120110016	polyacetal	1:1	2	16	30,4	10	34,9	32	21,9	10	21,2	9,7	18,3	80,4	22432-120110016
22432-125110016	polyacetal	1:1	2,5	16	37	12,3	43,5	40	25,2	12	25,5	11,5	22,9	154,5	22432-125110016
22432-130110016	polyacetal	1:1	3	16	43	13,8	52,3	48	28,8	14	29,2	13,2	25,7	249,7	22432-130110016
22432-135110016	polyacetal	1:1	3,5	16	49,5	15,8	61,4	56	33,3	18	33,1	14,6	28	389,1	22432-135110016
22432-205110016	polyketone	1:1	0,5	16	10,5	2	8,7	8	7	3	8,1	6	8,1	1	22432-205110016
22432-210110016	polyketone	1:1	1	16	18,4	4,7	17,6	16	12	5	13,6	8	13,6	9,9	22432-210110016
22432-210110030	polyketone	1:1	1	30	25,1	7	31	30	15	6	15,4	7,6	13,3	27,7	22432-210110030
22432-215110016	polyketone	1:1	1,5	16	25,8	7	26,4	24	18,5	8	18,4	10	16,2	33,2	22432-215110016
22432-220110016	polyketone	1:1	2	16	30,4	10	34,9	32	21,9	10	21,2	9,7	18,3	84,4	22432-220110016
22432-225110016	polyketone	1:1	2,5	16	37	12,3	43,5	40	25,2	12	25,5	11,5	22,9	162,3	22432-225110016
22432-230110016	polyketone	1:1	3	16	43	13,8	52,3	48	28,8	14	29,2	13,2	25,7	262,2	22432-230110016
22432-235110016	polyketone	1:1	3,5	16	49,5	15,8	61,4	56	33,3	18	33,1	14,6	28	408,6	22432-235110016

Bevel gears, plastic, ratio 1:1.5

injection moulded, straight teeth, engagement angle 20°





Material:
Polyacetal (POM) or polyketone (PK).

Version:
Injection moulded, straight teeth. Engagement angle 20°. Axis angle = 90°.
Machined bores from module 1.5.
Polyacetal, white.
Polyketone, ivory tone.

Sample order:
nlm 22432-115115016

Note:
Polyacetal: Standard material with high hardness grade and low coefficient of friction.

Polyketone: Material with significantly longer service life, higher power transmission and greater security against tooth breakage due to the extraordinarily high wear resistance and very good tribological properties.

Can be used under water and other media.

Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

Bevel gear wheels are supplied as single components. To obtain a pair of bevel gear wheels, please order the specified mating gear as well.

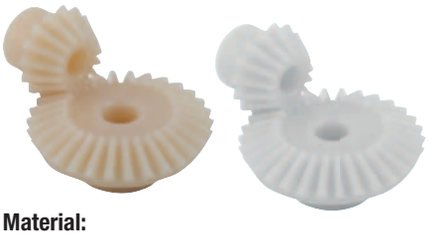
Temperature range:
-40 °C to +140 °C (taking amount and duration of load into account).

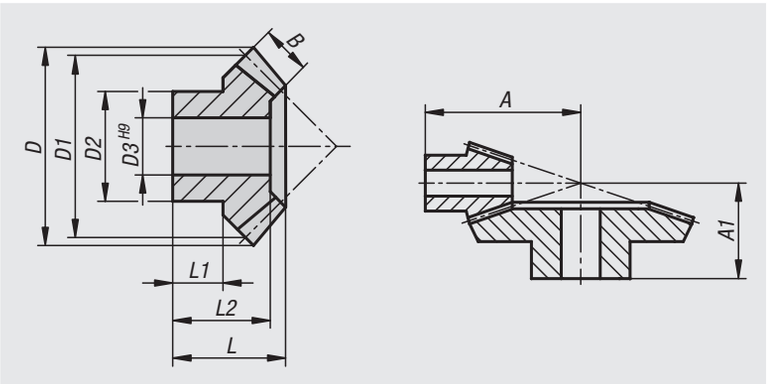
Attention:
The torques specified in the tables relate exclusively to the toothing. The shaft diameter, key size, etc. are not taken into account. The permissible load calculations are based on the basic principles of the pitting load capacity of the tooth flanks as well as the occurring tooth root stress. The respective permissible load of a gear wheel depends on so many different factors that the values specified can only be reference values meant to make selection easier. The torque specifications relate to a single tooth. The overlap, which is essential for determining the transmissible torque, occurs depending on the pitch diameter, gear wheel pairing, etc. In the simplest straight tooth cases, an overlap ratio of 1.1 to 1.25 is normal. To increase the overlap, a higher number of teeth with smaller modules is used. A good profile overlap can minimise damage such as pitting.

Order No.	Main material	Transmission ratio	Module	No. of teeth	A	A1	B	D	D1	D2	D3	L	L1	L2	Max. torque Ncm	matching opposing gear
22432-115115016	polyacetal	1:1,5	1,5	16	30	-	8	26	24	20	8	18,8	10,8	17,8	36,1	22432-115115024
22432-115115024	polyacetal	1:1,5	1,5	24	-	26,6	8	37	36	24	10	19,5	11,3	18	54,2	22432-115115016
22432-215115016	polyketone	1:1,5	1,5	16	30	-	8	26	24	20	8	18,8	10,8	17,8	38	22432-215115024
22432-215115024	polyketone	1:1,5	1,5	24	-	26,6	8	37	36	24	10	19,5	11,3	18	57	22432-215115016

Bevel gears, plastic, ratio 1:2

injection moulded, straight teeth, engagement angle 20°





Material:
Polyacetal (POM) or polyketone (PK).

Version:
Injection moulded, straight teeth. Engagement angle 20°. Axis angle = 90°.
Machined bores from module 1.5.
Polyacetal, white.
Polyketone, ivory tone.

Sample order:
nlm 22432-110120015

Note:
Polyacetal: Standard material with high hardness grade and low coefficient of friction.

Polyketone: Material with significantly longer service life, higher power transmission and greater security against tooth breakage due to the extraordinarily high wear resistance and very good tribological properties.

Can be used under water and other media.

Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

Bevel gear wheels are supplied as single components. To obtain a pair of bevel gear wheels, please order the specified mating gear as well.

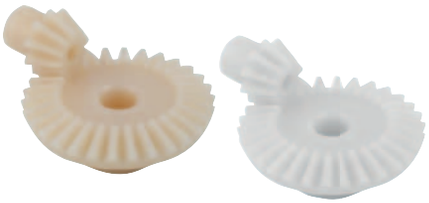
Temperature range:
-40 °C to +140 °C (taking amount and duration of load into account).

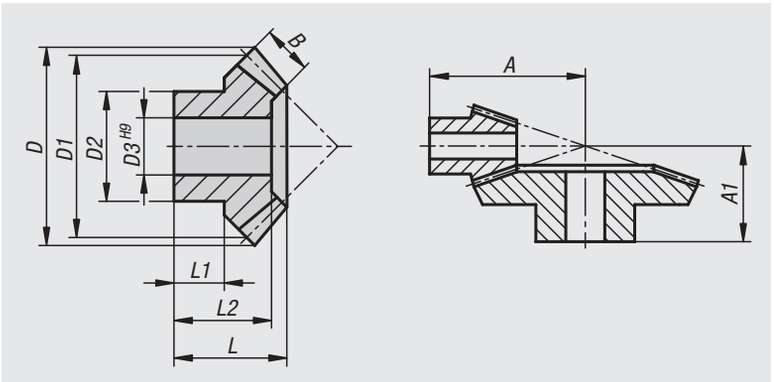
Attention:
The torques specified in the tables relate exclusively to the toothing. The shaft diameter, key size, etc. are not taken into account. The permissible load calculations are based on the basic principles of the pitting load capacity of the tooth flanks as well as the occurring tooth root stress. The respective permissible load of a gear wheel depends on so many different factors that the values specified can only be reference values meant to make selection easier. The torque specifications relate to a single tooth. The overlap, which is essential for determining the transmissible torque, occurs depending on the pitch diameter, gear wheel pairing, etc. In the simplest straight tooth cases, an overlap ratio of 1.1 to 1.25 is normal. To increase the overlap, a higher number of teeth with smaller modules is used. A good profile overlap can minimise damage such as pitting.

Order No.	Main material	Transmission ratio	Module	No. of teeth	A	A1	B	D	D1	D2	D3	L	L1	L2	Max. torque Ncm	matching opposing gear
22432-110120015	polyacetal	1:2	1	15	26,3	-	6,4	16,6	15	12,2	5	17,1	10,5	17,1	12	22432-110120030
22432-110120030	polyacetal	1:2	1	30	-	20,8	6,9	31	30	18	8	16	9	14,7	26	22432-110120015
22432-115120015	polyacetal	1:2	1,5	15	35,8	-	10,5	25	22,5	17	8	22,8	11,7	22,8	44,5	22432-115120030
22432-115120030	polyacetal	1:2	1,5	30	-	25,9	10,7	46,3	45	23,4	10	19,6	9,6	17,5	90,7	22432-115120015
22432-120120015	polyacetal	1:2	2	15	44	-	14,5	33,3	30	22,6	10	27	12	26	109,3	22432-120120030
22432-120120030	polyacetal	1:2	2	30	-	35	14,2	62	60	30,2	12	24,5	12	22,4	214,1	22432-120120015
22432-125120015	polyacetal	1:2	2,5	15	53,3	-	17,1	42	37,5	26,5	12	31,1	12,7	29,5	201,4	22432-125120030
22432-125120030	polyacetal	1:2	2,5	30	-	40,8	17,4	77,2	75	35,8	16	29,6	15,2	27,6	409,9	22432-125120015
22432-130120015	polyacetal	1:2	3	15	63,3	-	20,2	50	45	31,2	14	36,4	15,3	34,8	342,6	22432-130120030
22432-130120030	polyacetal	1:2	3	30	-	49,9	20,5	92,5	90	45	18	37,5	19	33,8	695,5	22432-130120015
22432-210120015	polyketone	1:2	1	15	26,3	-	6,4	16,6	15	12,2	5	17,1	10,5	17,1	12,6	22432-210120030
22432-210120030	polyketone	1:2	1	30	-	20,8	6,9	31	30	18	8	16	9	14,7	27,3	22432-210120015
22432-215120015	polyketone	1:2	1,5	15	35,8	-	10,5	25	22,5	17	8	22,8	11,7	22,8	46,7	22432-215120030
22432-215120030	polyketone	1:2	1,5	30	-	25,9	10,7	46,3	45	23,4	10	19,6	9,6	17,5	95,3	22432-215120015
22432-220120015	polyketone	1:2	2	15	44	-	14,5	33,3	30	22,6	10	27	12	26	114,8	22432-220120030
22432-220120030	polyketone	1:2	2	30	-	35	14,2	62	60	30,2	12	24,5	12	22,4	224,8	22432-220120015
22432-225120015	polyketone	1:2	2,5	15	53,3	-	17,1	42	37,5	26,5	12	31,1	12,7	29,5	211,5	22432-225120030
22432-225120030	polyketone	1:2	2,5	30	-	40,8	17,4	77,2	75	35,8	16	29,6	15,2	27,6	430,4	22432-225120015
22432-230120015	polyketone	1:2	3	15	63,3	-	20,2	50	45	31,2	14	36,4	15,3	34,8	359,8	22432-230120030
22432-230120030	polyketone	1:2	3	30	-	49,9	20,5	92,5	90	45	18	37,5	19	33,8	730,3	22432-230120015

Bevel gears, plastic, ratio 1:3

injection moulded, straight teeth, engagement angle 20°





Material:
Polyacetal (POM) or polyketone (PK).

Version:
Injection moulded, straight teeth. Engagement angle 20°. Axis angle = 90°.
Machined bores from module 1.5.
Polyacetal, white.
Polyketone, ivory tone.

Sample order:
nlm 22432-110130015

Note:
Polyacetal: Standard material with high hardness grade and low coefficient of friction.

Polyketone: Material with significantly longer service life, higher power transmission and greater security against tooth breakage due to the extraordinarily high wear resistance and very good tribological properties.

Can be used under water and other media.

Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

Bevel gear wheels are supplied as single components. To obtain a pair of bevel gear wheels, please order the specified mating gear as well.

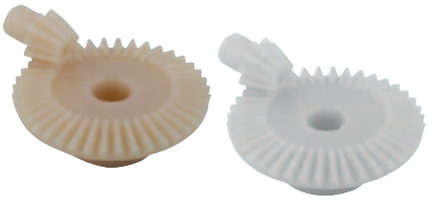
Temperature range:
-40 °C to +140 °C (taking amount and duration of load into account).

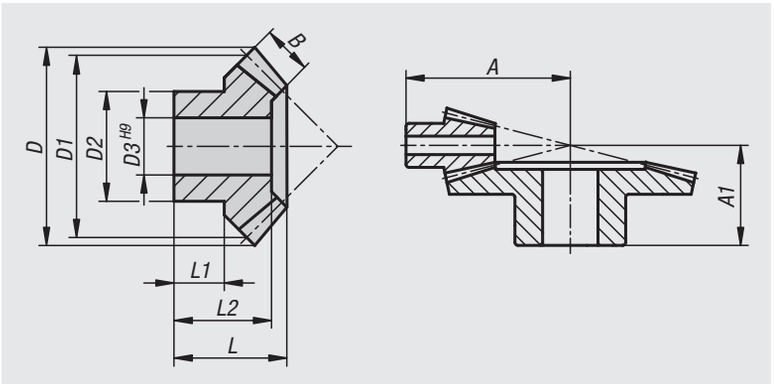
Attention:
The torques specified in the tables relate exclusively to the toothing. The shaft diameter, key size, etc. are not taken into account. The permissible load calculations are based on the basic principles of the pitting load capacity of the tooth flanks as well as the occurring tooth root stress. The respective permissible load of a gear wheel depends on so many different factors that the values specified can only be reference values meant to make selection easier. The torque specifications relate to a single tooth. The overlap, which is essential for determining the transmissible torque, occurs depending on the pitch diameter, gear wheel pairing, etc. In the simplest straight tooth cases, an overlap ratio of 1.1 to 1.25 is normal. To increase the overlap, a higher number of teeth with smaller modules is used. A good profile overlap can minimise damage such as pitting.

Order No.	Main material	Transmission ratio	Module	No. of teeth	A	A1	B	D	D1	D2	D3	L	L1	L2	Max. torque Ncm	matching opposing gear
22432-110130015	polyacetal	1:3	1	15	34,3	-	9	16,4	15	12,3	5	20,5	11,4	-	16,9	22432-110130045
22432-110130045	polyacetal	1:3	1	45	-	22,4	8,8	45,7	45	23,4	10	17,9	9,6	16,2	49,7	22432-110130015
22432-115130015	polyacetal	1:3	1,5	15	47,3	-	14	25,1	22,5	17,2	8	26,6	12,3	-	59,3	22432-115130045
22432-115130045	polyacetal	1:3	1,5	45	-	29,7	14	68,5	67,5	30,4	12	23,2	11,8	21,4	178,1	22432-115130015
22432-120130010	polyacetal	1:3	2	10	43,3	-	12,2	23,6	20	15,5	6	25	12	-	61,3	22432-120130030
22432-120130030	polyacetal	1:3	2	30	-	28	12,5	61,7	60	30,3	12	22,5	11,8	19,8	188,5	22432-120130010
22432-125130010	polyacetal	1:3	2,5	10	52,4	-	15,2	29,6	25	18,8	8	28,7	13	-	119,3	22432-125130030
22432-125130030	polyacetal	1:3	2,5	30	-	35,8	15,7	77,2	75	36	18	29	15,9	25	369,9	22432-125130010
22432-210130015	polyketone	1:3	1	15	34,3	-	9	16,4	15	12,3	5	20,5	11,4	-	17,8	22432-210130045
22432-210130045	polyketone	1:3	1	45	-	22,4	8,8	45,7	45	23,4	10	17,9	9,6	16,2	52,2	22432-210130015
22432-215130015	polyketone	1:3	1,5	15	47,3	-	14	25,1	22,5	17,2	8	26,6	12,3	-	62,3	22432-215130045
22432-215130045	polyketone	1:3	1,5	45	-	29,7	14	68,5	67,5	30,4	12	23,2	11,8	21,4	187	22432-215130015
22432-220130010	polyketone	1:3	2	10	43,3	-	12,2	23,6	20	15,5	6	25	12	-	64,3	22432-220130030
22432-220130030	polyketone	1:3	2	30	-	28	12,5	61,7	60	30,3	12	22,5	11,8	19,8	197,9	22432-220130010
22432-225130010	polyketone	1:3	2,5	10	52,4	-	15,2	29,6	25	18,8	8	28,7	13	-	125,3	22432-225130030
22432-225130030	polyketone	1:3	2,5	30	-	35,8	15,7	77,2	75	36	18	29	15,9	25	388,4	22432-225130010

Bevel gears, plastic, ratio 1:4

injection-moulded, straight teeth, engagement angle 20°





Material:
Polyacetal (POM) or polyketone (PK).

Version:
Injection moulded, straight teeth. Engagement angle 20°. Axis angle = 90°.
Machined bores from module 1.5.
Polyacetal, white.
Polyketone, ivory tone.

Sample order:
nlm 22432-110140010

Note:
Polyacetal: Standard material with high hardness grade and low coefficient of friction.

Polyketone: Material with significantly longer service life, higher power transmission and greater security against tooth breakage due to the extraordinarily high wear resistance and very good tribological properties.

Can be used under water and other media.

Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

Bevel gear wheels are supplied as single components. To obtain a pair of bevel gear wheels, please order the specified mating gear as well.

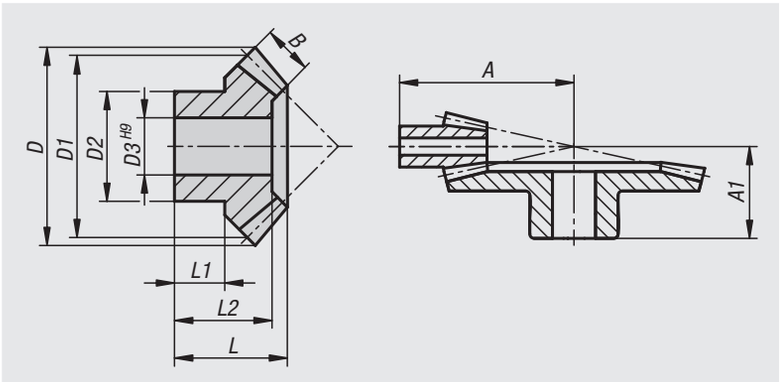
Temperature range:
-40 °C to +140 °C (taking amount and duration of load into account).

Attention:
The torques specified in the tables relate exclusively to the toothing. The shaft diameter, key size, etc. are not taken into account. The permissible load calculations are based on the basic principles of the pitting load capacity of the tooth flanks as well as the occurring tooth root stress. The respective permissible load of a gear wheel depends on so many different factors that the values specified can only be reference values meant to make selection easier. The torque specifications relate to a single tooth. The overlap, which is essential for determining the transmissible torque, occurs depending on the pitch diameter, gear wheel pairing, etc. In the simplest straight tooth cases, an overlap ratio of 1.1 to 1.25 is normal. To increase the overlap, a higher number of teeth with smaller modules is used. A good profile overlap can minimise damage such as pitting.

Order No.	Main material	Transmission ratio	Module	No. of teeth	A	A1	B	D	D1	D2	D3	L	L1	L2	Max. torque Ncm	matching opposing gear
22432-110140010	polyacetal	1:4	1	10	30,2	-	8	12	10	7,9	4	17,7	9,6	-	10	22432-110140040
22432-110140040	polyacetal	1:4	1	40	-	20,2	8,4	41	40	23,4	10	16,9	10,8	15,5	42,2	22432-110140010
22432-115140010	polyacetal	1:4	1,5	10	41,5	-	12,2	18	15	11,3	5	23,2	11	-	34,5	22432-115140040
22432-115140040	polyacetal	1:4	1,5	40	-	25,2	12,3	60,7	60	30,4	12	21	12,8	19	139,1	22432-115140010
22432-120140010	polyacetal	1:4	2	10	53,5	-	16	23,7	20	14	6	28,7	12,8	-	80,4	22432-120140040
22432-120140040	polyacetal	1:4	2	40	-	32,5	16,2	81,2	80	36,1	18	27	17	24,4	325,7	22432-120140010
22432-210140010	polyketone	1:4	1	10	30,2	-	8	12	10	7,9	4	17,7	9,6	-	10,5	22432-210140040
22432-210140040	polyketone	1:4	1	40	-	20,2	8,4	41	40	23,4	10	16,9	10,8	15,5	44,3	22432-210140010
22432-215140010	polyketone	1:4	1,5	10	41,5	-	12,2	18	15	11,3	5	23,2	11	-	36,2	22432-215140040
22432-215140040	polyketone	1:4	1,5	40	-	25,2	12,3	60,7	60	30,4	12	21	12,8	19	146	22432-215140010
22432-220140010	polyketone	1:4	2	10	53,5	-	16	23,7	20	14	6	28,7	12,8	-	84,4	22432-220140040
22432-220140040	polyketone	1:4	2	40	-	32,5	16,2	81,2	80	36,1	18	27	17	24,4	342	22432-220140010

Bevel gears, plastic, ratio 1:5

injection moulded, straight teeth, engagement angle 20°



Material:
Polyacetal (POM) or polyketone (PK).

Version:
Injection moulded, straight teeth. Engagement angle 20°. Axis angle = 90°.
Machined bores from module 1.5.
Polyacetal, white.
Polyketone, ivory tone.

Sample order:
nlm 22432-110150012

Note:
Polyacetal: Standard material with high hardness grade and low coefficient of friction.

Polyketone: Material with significantly longer service life, higher power transmission and greater security against tooth breakage due to the extraordinarily high wear resistance and very good tribological properties.

Can be used under water and other media.

Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

Bevel gear wheels are supplied as single components. To obtain a pair of bevel gear wheels, please order the specified mating gear as well.

Temperature range:
-40 °C to +140 °C (taking amount and duration of load into account).

Attention:
The torques specified in the tables relate exclusively to the toothing. The shaft diameter, key size, etc. are not taken into account. The permissible load calculations are based on the basic principles of the pitting load capacity of the tooth flanks as well as the occurring tooth root stress. The respective permissible load of a gear wheel depends on so many different factors that the values specified can only be reference values meant to make selection easier. The torque specifications relate to a single tooth. The overlap, which is essential for determining the transmissible torque, occurs depending on the pitch diameter, gear wheel pairing, etc. In the simplest straight tooth cases, an overlap ratio of 1.1 to 1.25 is normal. To increase the overlap, a higher number of teeth with smaller modules is used. A good profile overlap can minimise damage such as pitting.

Order No.	Main material	Transmission ratio	Module	No. of teeth	A	A1	B	D	D1	D2	D3	L	L1	L2	Max. torque Ncm	matching opposing gear
22432-110150012	polyacetal	1:5	1	12	40,6	-	9,9	13,7	12	9,5	4	20,2	10,1	-	14,9	22432-110150060
22432-110150060	polyacetal	1:5	1	60	-	21,2	9,5	60,3	60	20,5	10	17,4	11,2	15,3	71,6	22432-110150012
22432-210150012	polyketone	1:5	1	12	40,6	-	9,9	13,7	12	9,5	4	20,2	10,1	-	15,6	22432-210150060
22432-210150060	polyketone	1:5	1	60	-	21,2	9,5	60,3	60	20,5	10	17,4	11,2	15,3	75,2	22432-210150012