

## Description

### Material:

Polyacetal (POM) or polyketone (PK).

### Version:

Injection moulded, straight teeth. Engagement angle 20°. Machined bore.

Polyacetal, white.

Polyketone, ivory-tone.

### 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.

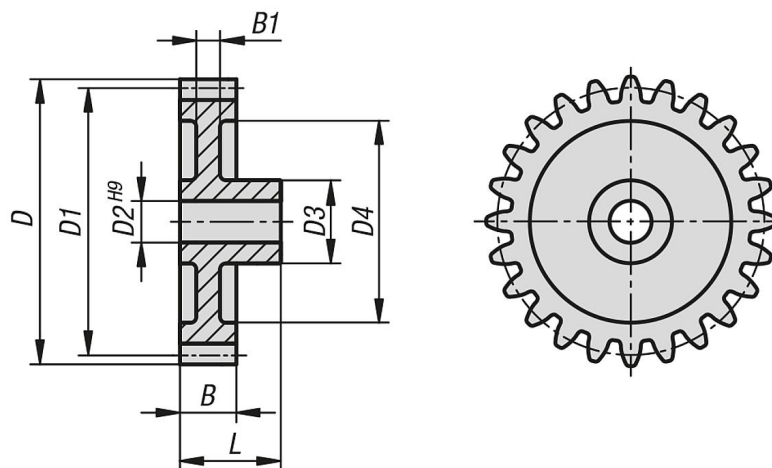
Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

### Temperature range:

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

### Note:

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.



Overview of items

Order No.	Main material	No. of teeth	D	D1	D2	D3	D4	B	B1	L	Max. torque Ncm
22402-1125012	polyacetal	12	17,5	15	5	9	-	10	10	19	29,4
22402-1125013	polyacetal	13	18,75	16,25	5	9	-	10	10	19	31,9
22402-1125014	polyacetal	14	20	17,5	5	9	-	10	10	19	34,3
22402-1125015	polyacetal	15	21,25	18,75	5	9	13	10	7	19	36,8
22402-1125016	polyacetal	16	22,5	20	5	9	13	10	7	19	39,7
22402-1125017	polyacetal	17	23,75	21,25	5	9	13	10	7	19	41,7
22402-1125018	polyacetal	18	25	22,5	5	12	16	10	7	19	44,1
22402-1125019	polyacetal	19	26,25	23,75	5	12	16	10	7	19	46,6
22402-1125020	polyacetal	20	27,5	25	5	12	16	10	7	19	49
22402-1125021	polyacetal	21	28,75	26,25	6	15	18,5	10	7	19	51,5
22402-1125022	polyacetal	22	30	27,5	6	15	18,5	10	7	19	54
22402-1125023	polyacetal	23	31,25	28,75	6	15	18,5	10	7	19	56,4
22402-1125024	polyacetal	24	32,5	30	6	15	21	10	7	19	58,9
22402-1125025	polyacetal	25	33,75	31,25	6	15	21	10	7	19	61,3
22402-1125026	polyacetal	26	35	32,5	6	18	23,5	10	5,5	19	63,8
22402-1125027	polyacetal	27	36,25	33,75	6	18	23,5	10	5,5	19	66,2
22402-1125028	polyacetal	28	37,5	35	8	18	23,5	10	5,5	19	68,7
22402-1125030	polyacetal	30	40	37,5	8	18	27	10	5,5	19	73,6
22402-1125032	polyacetal	32	42,5	40	8	18	27	10	5,5	19	78,5
22402-1125035	polyacetal	35	46,25	43,75	8	18	27	10	5,5	19	85,9
22402-1125036	polyacetal	36	47,5	45	8	18	36	10	5,5	19	88,3
22402-1125038	polyacetal	38	50	47,5	8	18	36	10	5,5	19	93,2
22402-1125040	polyacetal	40	52,5	50	8	18	36	10	5,5	19	98,1
22402-1125042	polyacetal	42	55	52,5	8	18	36	10	5,5	19	103
22402-1125045	polyacetal	45	58,75	56,25	8	21	46	10	5,5	19	110,4
22402-1125048	polyacetal	48	62,5	60	8	21	46	10	5,5	19	117,8
22402-1125050	polyacetal	50	65	62,5	8	21	46	10	5,5	19	122,7
22402-1125052	polyacetal	52	67,5	65	10	21	56	10	5,5	19	127,6
22402-1125054	polyacetal	54	70	67,5	10	21	56	10	5,5	19	132,5
22402-1125055	polyacetal	55	71,25	68,75	10	21	56	10	5,5	19	134,9
22402-1125056	polyacetal	56	72,5	70	10	21	56	10	5,5	19	137,4
22402-1125060	polyacetal	60	77,5	75	10	21	66	10	5,5	19	147,2
22402-1125064	polyacetal	64	82,5	80	10	21	66	10	5,5	19	157
22402-1125065	polyacetal	65	83,75	81,25	10	21	66	10	5,5	19	159,5
22402-1125070	polyacetal	70	90	87,5	10	21	76	10	5,5	19	171,8
22402-1125072	polyacetal	72	92,5	90	12	21	76	10	5,5	19	176,7
22402-1125075	polyacetal	75	96,25	93,75	10	21	76	10	5,5	19	184
22402-1125080	polyacetal	80	102,5	100	12	24	86	10	5,5	19	196,3
22402-1125090	polyacetal	90	115	112,5	12	24	95	10	5,5	19	220,8
22402-1125100	polyacetal	100	127,5	125	12	24	105,5	10	5,5	19	245,4
22402-1125110	polyacetal	110	140	137,5	12	24	115	10	5,5	19	269,9
22402-2125012	polyketone	12	17,5	15	5	9	-	10	10	19	30,9

# 22402 Spur gears, plastic, module 1.25 injection moulded, straight teeth, engagement angle 20°



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Order No.	Main material	No. of teeth	D	D1	D2	D3	D4	B	B1	L	Max. torque Ncm
22402-2125013	polyketone	13	18,75	16,25	5	9	-	10	10	19	33,5
22402-2125014	polyketone	14	20	17,5	5	9	-	10	10	19	36
22402-2125015	polyketone	15	21,25	18,75	5	9	13	10	7	19	38,6
22402-2125016	polyketone	16	22,5	20	5	9	13	10	7	19	41,7
22402-2125017	polyketone	17	23,75	21,25	5	9	13	10	7	19	43,8
22402-2125018	polyketone	18	25	22,5	5	12	16	10	7	19	46,3
22402-2125019	polyketone	19	26,25	23,75	5	12	16	10	7	19	48,9
22402-2125020	polyketone	20	27,5	25	5	12	16	10	7	19	51,5
22402-2125021	polyketone	21	28,75	26,25	6	15	18,5	10	7	19	54,1
22402-2125022	polyketone	22	30	27,5	6	15	18,5	10	7	19	56,7
22402-2125023	polyketone	23	31,25	28,75	6	15	18,5	10	7	19	59,2
22402-2125024	polyketone	24	32,5	30	6	15	21	10	7	19	61,8
22402-2125025	polyketone	25	33,75	31,25	6	15	21	10	7	19	64,4
22402-2125026	polyketone	26	35	32,5	6	18	23,5	10	5,5	19	67
22402-2125027	polyketone	27	36,25	33,75	6	18	23,5	10	5,5	19	69,5
22402-2125028	polyketone	28	37,5	35	8	18	23,5	10	5,5	19	72,1
22402-2125030	polyketone	30	40	37,5	8	18	27	10	5,5	19	77,3
22402-2125032	polyketone	32	42,5	40	8	18	27	10	5,5	19	82,4
22402-2125035	polyketone	35	46,25	43,75	8	18	27	10	5,5	19	90,2
22402-2125036	polyketone	36	47,5	45	8	18	36	10	5,5	19	92,7
22402-2125038	polyketone	38	50	47,5	8	18	36	10	5,5	19	97,9
22402-2125040	polyketone	40	52,5	50	8	18	36	10	5,5	19	103
22402-2125042	polyketone	42	55	52,5	8	18	36	10	5,5	19	108,2
22402-2125045	polyketone	45	58,75	56,25	8	21	46	10	5,5	19	115,9
22402-2125048	polyketone	48	62,5	60	8	21	46	10	5,5	19	123,7
22402-2125050	polyketone	50	65	62,5	8	21	46	10	5,5	19	128,8
22402-2125052	polyketone	52	67,5	65	10	21	56	10	5,5	19	134
22402-2125054	polyketone	54	70	67,5	10	21	56	10	5,5	19	139,1
22402-2125055	polyketone	55	71,25	68,75	10	21	56	10	5,5	19	141,7
22402-2125056	polyketone	56	72,5	70	10	21	56	10	5,5	19	144,3
22402-2125060	polyketone	60	77,5	75	10	21	66	10	5,5	19	154,6
22402-2125064	polyketone	64	82,5	80	10	21	66	10	5,5	19	164,9
22402-2125065	polyketone	65	83,75	81,25	10	21	66	10	5,5	19	167,5
22402-2125070	polyketone	70	90	87,5	10	21	76	10	5,5	19	180,4
22402-2125072	polyketone	72	92,5	90	12	21	76	10	5,5	19	185,5
22402-2125075	polyketone	75	96,25	93,75	10	21	76	10	5,5	19	193,2
22402-2125080	polyketone	80	102,5	100	12	24	86	10	5,5	19	206,1
22402-2125090	polyketone	90	115	112,5	12	24	95	10	5,5	19	231,9
22402-2125100	polyketone	100	127,5	125	12	24	105,5	10	5,5	19	257,7
22402-2125110	polyketone	110	140	137,5	12	24	115	10	5,5	19	283,4