

## 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.

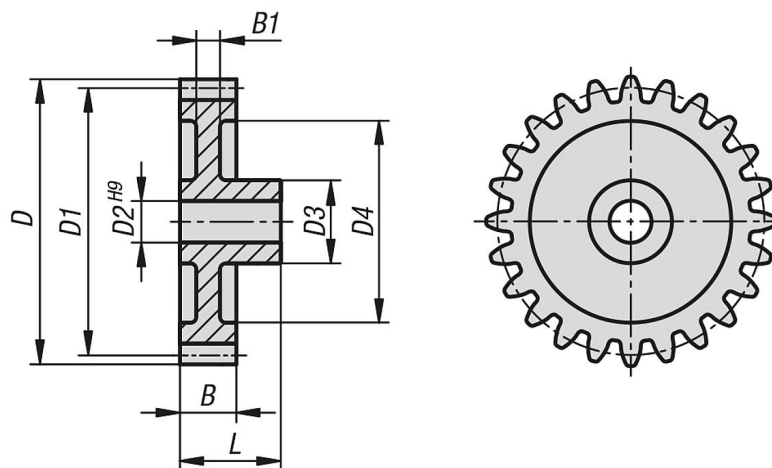
Injection moulded gear wheels may have internal manufacture-related cavities. These may become visible during drilling or broaching. They do not impair the function.

### 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
22402-1050012	polyacetal	12	7	6	2	4	-	3	3	7	1,4
22402-1050013	polyacetal	13	7,5	6,5	2	4	-	3	3	7	1,5
22402-1050014	polyacetal	14	8	7	2	5	-	3	3	7	1,6
22402-1050015	polyacetal	15	8,5	7,5	3	6	-	3	3	10	1,7
22402-1050016	polyacetal	16	9	8	3	6	-	3	3	10	1,8
22402-1050017	polyacetal	17	9,5	8,5	3	6	-	3	3	10	2
22402-1050018	polyacetal	18	10	9	4	7,8	-	3	3	10	2,1
22402-1050019	polyacetal	19	10,5	9,5	4	7,8	-	3	3	10	2,2
22402-1050020	polyacetal	20	11	10	4	7,9	-	3	3	10	2,3
22402-1050021	polyacetal	21	11,5	10,5	4	8	-	3	3	10	2,4
22402-1050022	polyacetal	22	12	11	4	10	-	3	3	10	2,5
22402-1050023	polyacetal	23	12,5	11,5	4	9,9	-	3	3	10	2,7
22402-1050024	polyacetal	24	13	12	4	9,9	-	3	3	10	2,8
22402-1050025	polyacetal	25	13,5	12,5	4	9,9	-	3	3	10	2,9
22402-1050026	polyacetal	26	14	13	4	9,9	-	3	3	10	3
22402-1050027	polyacetal	27	14,5	13,5	4	9,9	-	3	3	10	3,1
22402-1050028	polyacetal	28	15	14	4	10	-	3	3	10	3,3
22402-1050030	polyacetal	30	16	15	4	11,9	-	3	3	10	3,5
22402-1050032	polyacetal	32	17	16	4	12	-	3	3	10	3,7
22402-1050035	polyacetal	35	18,5	17,5	4	12	-	3	3	10	4,1
22402-1050036	polyacetal	36	19	18	4	11,9	-	3	3	10	4,2
22402-1050038	polyacetal	38	20	19	4	12	-	3	3	10	4,4
22402-1050040	polyacetal	40	21	20	4	12	14,8	3	2	10	4,7
22402-1050042	polyacetal	42	22	21	4	12,15	17	3	2	10	4,9
22402-1050045	polyacetal	45	23,5	22,5	4	12,15	18	3	2	10	5,3
22402-1050048	polyacetal	48	25	24	6	15	19	3	2	10	5,6
22402-1050050	polyacetal	50	26	25	6	15	20	3	2	10	5,8
22402-1050052	polyacetal	52	27	26	6	15	21	3	2	10	6,1
22402-1050054	polyacetal	54	28	27	6	15	21	3	2	10	6,3
22402-1050055	polyacetal	55	28,5	27,5	6	15	23	3	2	10	6,4
22402-1050056	polyacetal	56	29	28	6	15	23	3	2	10	6,6
22402-1050060	polyacetal	60	31	30	6	15	23	3	2	10	7
22402-1050064	polyacetal	64	33	32	6	15	23	3	2	10	7,5
22402-1050065	polyacetal	65	33,5	32,5	6	15	23	3	2	10	7,6
22402-1050070	polyacetal	70	36	35	6	15	29	3	2	10	8,2
22402-1050072	polyacetal	72	37	36	6	15	30	3	2	10	8,4
22402-1050075	polyacetal	75	38,5	37,5	6	15	33	3	2	10	8,8
22402-1050080	polyacetal	80	41	40	6	15	33	3	2	10	9,4
22402-1050090	polyacetal	90	46	45	6	15	39	3	2	10	10,6
22402-1050096	polyacetal	96	49	48	6	15	42	3	2	10	11,3
22402-1050100	polyacetal	100	51	50	6	15	44	3	2	10	11,7
22402-1050120	polyacetal	120	61	60	6	15	54	3	2	10	14,1

# 22402 Spur gears, plastic, module 0.5 injection moulded, straight teeth, engagement angle 20°



## Overview of items

Order No.	Main material	No. of teeth	D	D1	D2	D3	D4	B	B1	L	Max. torque Ncm
22402-2050012	polyketone	12	7	6	2	4	-	3	3	7	1,4
22402-2050013	polyketone	13	7,5	6,5	2	4	-	3	3	7	1,6
22402-2050014	polyketone	14	8	7	2	5	-	3	3	7	1,7
22402-2050015	polyketone	15	8,5	7,5	3	6	-	3	3	10	1,8
22402-2050016	polyketone	16	9	8	3	6	-	3	3	10	1,9
22402-2050017	polyketone	17	9,5	8,5	3	6	-	3	3	10	2,1
22402-2050018	polyketone	18	10	9	4	7,8	-	3	3	10	2,2
22402-2050019	polyketone	19	10,5	9,5	4	7,8	-	3	3	10	2,3
22402-2050020	polyketone	20	11	10	4	7,9	-	3	3	10	2,4
22402-2050021	polyketone	21	11,5	10,5	4	8	-	3	3	10	2,5
22402-2050022	polyketone	22	12	11	4	10	-	3	3	10	2,7
22402-2050023	polyketone	23	12,5	11,5	4	9,9	-	3	3	10	2,8
22402-2050024	polyketone	24	13	12	4	9,9	-	3	3	10	2,9
22402-2050025	polyketone	25	13,5	12,5	4	9,9	-	3	3	10	3,1
22402-2050026	polyketone	26	14	13	4	9,9	-	3	3	10	3,2
22402-2050027	polyketone	27	14,5	13,5	4	9,9	-	3	3	10	3,3
22402-2050028	polyketone	28	15	14	4	10	-	3	3	10	3,4
22402-2050030	polyketone	30	16	15	4	11,9	-	3	3	10	3,7
22402-2050032	polyketone	32	17	16	4	12	-	3	3	10	3,9
22402-2050035	polyketone	35	18,5	17,5	4	12	-	3	3	10	4,3
22402-2050036	polyketone	36	19	18	4	11,9	-	3	3	10	4,4
22402-2050038	polyketone	38	20	19	4	12	-	3	3	10	4,7
22402-2050040	polyketone	40	21	20	4	12	14,8	3	2	10	4,9
22402-2050042	polyketone	42	22	21	4	12,15	17	3	2	10	5,2
22402-2050045	polyketone	45	23,5	22,5	4	12,15	18	3	2	10	5,5
22402-2050048	polyketone	48	25	24	6	15	19	3	2	10	5,9
22402-2050050	polyketone	50	26	25	6	15	20	3	2	10	6,1
22402-2050052	polyketone	52	27	26	6	15	21	3	2	10	6,4
22402-2050054	polyketone	54	28	27	6	15	21	3	2	10	6,6
22402-2050055	polyketone	55	28,5	27,5	6	15	23	3	2	10	6,8
22402-2050056	polyketone	56	29	28	6	15	23	3	2	10	6,9
22402-2050060	polyketone	60	31	30	6	15	23	3	2	10	7,4
22402-2050064	polyketone	64	33	32	6	15	23	3	2	10	7,9
22402-2050065	polyketone	65	33,5	32,5	6	15	23	3	2	10	8
22402-2050070	polyketone	70	36	35	6	15	29	3	2	10	8,6
22402-2050072	polyketone	72	37	36	6	15	30	3	2	10	8,9
22402-2050075	polyketone	75	38,5	37,5	6	15	33	3	2	10	9,2
22402-2050080	polyketone	80	41	40	6	15	33	3	2	10	9,8
22402-2050090	polyketone	90	46	45	6	15	39	3	2	10	11,1
22402-2050096	polyketone	96	49	48	6	15	42	3	2	10	11,8
22402-2050100	polyketone	100	51	50	6	15	44	3	2	10	12,3
22402-2050120	polyketone	120	61	60	6	15	54	3	2	10	14,8