

## Spur Gears

Acetal resin based technopolymer, pressure angle 20°

### MATERIAL

Acetal resin based (POM-C) technopolymer, white colour.

### STANDARD EXECUTIONS

- H10 reamed pass-through hole.
- **ZCP-0.5**: module 0.5.
- **ZCP-0.7**: module 0.7.
- **ZCP-1.0**: module 1.0.
- **ZCP-1.25**: module 1.25.
- **ZCP-1.5**: module 1.5.
- **ZCP-2.0**: module 2.0.
- **ZCP-3.0**: module 3.0.

### FEATURES

The torques indicated in the tables are granted with rpm included between 0 and 150. Torque values can vary depending on lubrication, temperature, pairing with different materials and continuous operating hours.

Excellent sliding properties, reduced coefficient of friction, and high resistance to wear and tear make this product suitable for high rotation speeds (above 1,000rpm) even in the absence of lubrication. The acetal resin based technopolymer makes the product suitable for use in food sectors, in humid environments, and guarantees high resistance to chemical agents, including many solvents.

### TECHNICAL DATA

See: Transmission elements.

### SPECIAL EXECUTIONS ON REQUEST

- Hub with threaded grub screw
- Hub with hole and keyway in compliance with UNI 6604

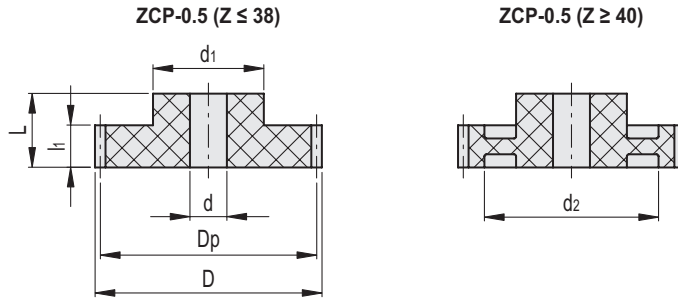
### MOUNTING

To pair two spur gears, a positive backlash must be considered.

For modules 0.5 - 0.7 - 1.0 - 1.25 - 1.5 is recommended the tolerance (+0.03 +0.1). For modules 2.0 - 3.0 is recommended the tolerance (+0.08 +0.3).

The H10 reamed hole allows the gear to be mounted on the shaft. In the case of application with low torques, a hole and keyway for coupling is not necessary as a threaded screw is sufficient. It is not recommended to enlarge the hole by more than 2mm with respect to the diameter shown in the tables, to avoid the occurrence of cracks in the material.



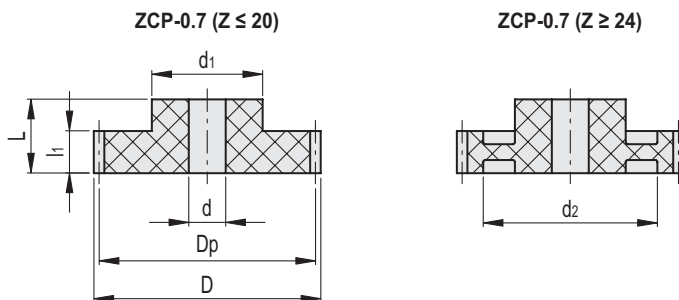


ZCP-0.5

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖️
555012	ZCP-0.5-12	0.5	12	6	7	7	2	4	-	3	2	1
555013	ZCP-0.5-13	0.5	13	6.5	7.5	7	2	4	-	3	2.2	1
555014	ZCP-0.5-14	0.5	14	7	8	7	2	5	-	3	2.4	1
555015	ZCP-0.5-15	0.5	15	7.5	8.5	10	3	5.8	-	3	2.5	1
555016	ZCP-0.5-16	0.5	16	8	9	10	3	5.8	-	3	2.7	1
555017	ZCP-0.5-17	0.5	17	8.5	9.5	10	3	5.8	-	3	2.9	1
555018	ZCP-0.5-18	0.5	18	9	10	10	4	7.4	-	3	3.1	1
555019	ZCP-0.5-19	0.5	19	9.5	10.5	10	4	7.4	-	3	3.2	1
555020	ZCP-0.5-20	0.5	20	10	11	10	4	7.4	-	3	3.4	1
555021	ZCP-0.5-21	0.5	21	10.5	11.5	10	4	8	-	3	3.5	1
555022	ZCP-0.5-22	0.5	22	11	12	10	4	9	-	3	3.8	1
555023	ZCP-0.5-23	0.5	23	11.5	12.5	10	4	9	-	3	3.9	1
555024	ZCP-0.5-24	0.5	24	12	13	10	4	9	-	3	4.1	1
555025	ZCP-0.5-25	0.5	25	12.5	13.5	10	4	9	-	3	4.3	1
555026	ZCP-0.5-26	0.5	26	13	14	10	4	9	-	3	4.5	1
555027	ZCP-0.5-27	0.5	27	13.5	14.5	10	4	9	-	3	4.6	1
555028	ZCP-0.5-28	0.5	28	14	15	10	4	9	-	3	4.8	1
555030	ZCP-0.5-30	0.5	30	15	16	10	4	12	-	3	5.2	2
555032	ZCP-0.5-32	0.5	32	16	17	10	4	12	-	3	5.5	2
555035	ZCP-0.5-35	0.5	35	17.5	18.5	10	4	12	-	3	6	2
555036	ZCP-0.5-36	0.5	36	18	19	10	4	12	-	3	6.2	2
555038	ZCP-0.5-38	0.5	38	19	20	10	4	12	-	3	6.6	2
555040	ZCP-0.5-40	0.5	40	20	21	10	4	12	16.5	3	6.9	2
555042	ZCP-0.5-42	0.5	42	21	22	10	4	12	16.5	3	7.3	2
555045	ZCP-0.5-45	0.5	45	22.5	23.5	10	4	12	16.5	3	7.7	2
555048	ZCP-0.5-48	0.5	48	24	25	10	6	15	20	3	8.3	3
555050	ZCP-0.5-50	0.5	50	25	26	10	6	15	20	3	8.6	3
555052	ZCP-0.5-52	0.5	52	26	27	10	6	15	20	3	9	3
555054	ZCP-0.5-54	0.5	54	27	28	10	6	15	20	3	9.3	3
555055	ZCP-0.5-55	0.5	55	27.5	28.5	10	6	15	23	3	9.5	3
555056	ZCP-0.5-56	0.5	56	28	29	10	6	15	23	3	9.7	4
555060	ZCP-0.5-60	0.5	60	30	31	10	6	15	23	3	10.4	4
555064	ZCP-0.5-64	0.5	64	32	33	10	6	15	23	3	11.1	4
555065	ZCP-0.5-65	0.5	65	32.5	33.5	10	6	15	23	3	11.2	4
555070	ZCP-0.5-70	0.5	70	35	36	10	6	15	30	3	12.1	5
555072	ZCP-0.5-72	0.5	72	36	37	10	6	15	30	3	12.5	5
555075	ZCP-0.5-75	0.5	75	37.5	38.5	10	6	15	33	3	13	5
555080	ZCP-0.5-80	0.5	80	40	41	10	6	15	33	3	13.7	6
555090	ZCP-0.5-90	0.5	90	45	46	10	6	15	39	3	15.6	7
555096	ZCP-0.5-96	0.5	96	48	49	10	6	15	42	3	16.5	8
555100	ZCP-0.5-100	0.5	100	50	51	10	6	15	44	3	17.3	8
555120	ZCP-0.5-120	0.5	120	60	61	10	6	15	54	3	20.8	10

\* Pitch diameter.

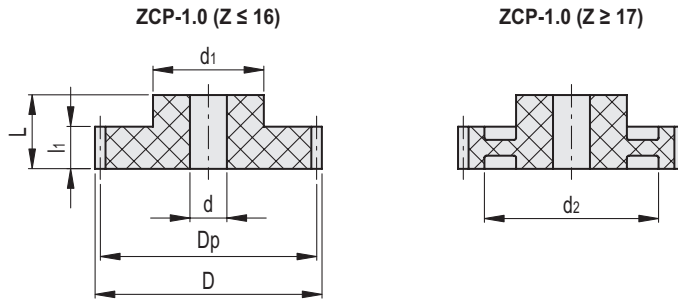




ZCP-0.7

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖
555212	ZCP-0.7-12	0.7	12	8.4	9.8	15	3	6	-	6	8.1	1
555214	ZCP-0.7-14	0.7	14	9.8	11.2	15	3	6	-	6	9.4	1
555216	ZCP-0.7-16	0.7	16	11.2	12.6	15	4	9	-	6	10.8	1
555218	ZCP-0.7-18	0.7	18	12.6	14	15	4	9	-	6	12.2	2
555220	ZCP-0.7-20	0.7	20	14	15.4	15	4	9	-	6	13.6	2
555224	ZCP-0.7-24	0.7	24	16.8	18.2	15	4	9	13	6	16.3	2
555225	ZCP-0.7-25	0.7	25	17.5	18.9	15	6	9	13	6	17	2
555228	ZCP-0.7-28	0.7	28	19.6	21	15	6	9	13	6	19	3
555230	ZCP-0.7-30	0.7	30	21	22.4	15	6	12	16	6	20.3	3
555232	ZCP-0.7-32	0.7	32	22.4	23.8	15	6	12	16	6	21.7	4
555236	ZCP-0.7-36	0.7	36	25.2	26.6	15	6	15	21	6	24.4	5
555240	ZCP-0.7-40	0.7	40	28	29.4	15	6	15	21	6	28	6
555248	ZCP-0.7-48	0.7	48	33.6	35	15	8	18	24	6	33.6	7
555250	ZCP-0.7-50	0.7	50	35	36.4	15	8	18	28	6	35	8
555256	ZCP-0.7-56	0.7	56	39.2	40.6	15	8	18	30	6	39.2	9
555260	ZCP-0.7-60	0.7	60	42	43.4	15	8	18	30	6	42	10
555268	ZCP-0.7-68	0.7	68	47.6	49	15	8	18	37	6	47.6	11
555270	ZCP-0.7-70	0.7	70	49	50.4	15	8	18	37	6	49	12
555280	ZCP-0.7-80	0.7	80	56	57.4	15	10	21	47	6	56	16
555290	ZCP-0.7-90	0.7	90	63	64.4	15	10	21	57	6	63	17
555300	ZCP-0.7-100	0.7	100	70	71.4	15	10	21	57	6	70	23
555320	ZCP-0.7-120	0.7	120	84	85.4	15	10	21	77	6	84	25

\* Pitch diameter.

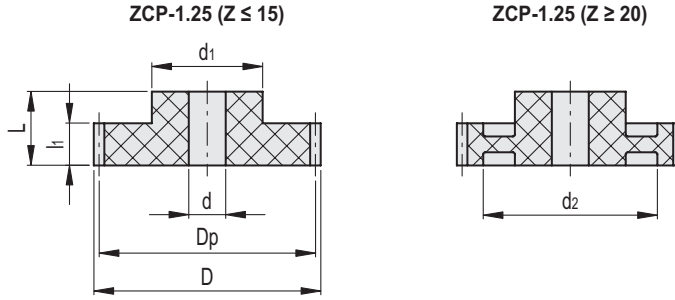


ZCP-1.0

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖
555412	ZCP-1.0-12	1.0	12	12	14	17	4	9	-	9	25	2
555413	ZCP-1.0-13	1.0	13	13	15	17	4	9	-	9	27.1	2
555414	ZCP-1.0-14	1.0	14	14	16	17	4	9	-	9	29	2
555415	ZCP-1.0-15	1.0	15	15	17	17	4	9	-	9	31.1	3
555416	ZCP-1.0-16	1.0	16	16	18	17	4	9	-	9	33.2	3
555417	ZCP-1.0-17	1.0	17	17	19	17	4	9	12	9	35.3	3
555418	ZCP-1.0-18	1.0	18	18	20	17	4	9	12	9	37.4	3
555419	ZCP-1.0-19	1.0	19	19	21	17	4	9	12	9	39.6	4
555420	ZCP-1.0-20	1.0	20	20	22	17	4	9	12	9	41.5	4
555421	ZCP-1.0-21	1.0	21	21	23	17	5	12	16	9	43.6	4
555422	ZCP-1.0-22	1.0	22	22	24	17	5	12	16	9	45.7	5
555423	ZCP-1.0-23	1.0	23	23	25	17	5	12	16	9	47.8	5
555424	ZCP-1.0-24	1.0	24	24	26	18	6	15	18	9	50	7
555425	ZCP-1.0-25	1.0	25	25	27	18	6	15	18	9	52	7
555426	ZCP-1.0-26	1.0	26	26	28	18	6	15	18	9	54.1	8
555427	ZCP-1.0-27	1.0	27	27	29	18	6	15	18	9	56.1	8
555428	ZCP-1.0-28	1.0	28	28	30	18	6	15	21	9	58.2	8
555430	ZCP-1.0-30	1.0	30	30	32	18	6	15	21	9	62.4	9
555432	ZCP-1.0-32	1.0	32	32	34	18	6	18	24	9	66.6	11
555435	ZCP-1.0-35	1.0	35	35	37	18	8	18	24	9	72.8	13
555436	ZCP-1.0-36	1.0	36	36	38	18	8	18	27	9	75	13
555438	ZCP-1.0-38	1.0	38	38	40	18	8	18	27	9	79.1	14
555440	ZCP-1.0-40	1.0	40	40	42	18	8	18	27	9	83.2	16
555442	ZCP-1.0-42	1.0	42	42	44	18	8	18	27	9	87.4	18
555445	ZCP-1.0-45	1.0	45	45	47	18	8	18	37	9	93.7	17
555448	ZCP-1.0-48	1.0	48	48	50	18	8	18	37	9	100	20
555450	ZCP-1.0-50	1.0	50	50	52	18	8	21	40	9	104.1	22
555452	ZCP-1.0-52	1.0	52	52	54	18	8	21	40	9	108.1	24
555454	ZCP-1.0-54	1.0	54	54	56	18	8	21	46	9	112.3	24
555455	ZCP-1.0-55	1.0	55	55	57	18	8	21	46	9	114.4	25
555456	ZCP-1.0-56	1.0	56	56	58	18	8	21	46	9	116.5	26
555458	ZCP-1.0-58	1.0	58	58	60	18	8	21	46	9	120.8	28
555460	ZCP-1.0-60	1.0	60	60	62	18	8	21	46	9	124.8	31
555464	ZCP-1.0-64	1.0	64	64	66	18	10	21	57	9	133.2	30
555465	ZCP-1.0-65	1.0	65	65	67	18	10	21	57	9	135.2	31
555470	ZCP-1.0-70	1.0	70	70	72	18	10	21	62	9	145.7	35
555472	ZCP-1.0-72	1.0	72	72	74	18	10	21	62	9	149.8	38
555475	ZCP-1.0-75	1.0	75	75	77	18	10	21	62	9	156.1	42
555480	ZCP-1.0-80	1.0	80	80	82	18	10	21	70	9	166.5	45
555485	ZCP-1.0-85	1.0	85	85	87	18	10	21	70	9	177	53
555490	ZCP-1.0-90	1.0	90	90	92	18	10	22	80	9	187.2	55
555500	ZCP-1.0-100	1.0	100	100	102	18	12	24	90	9	208.1	66
555510	ZCP-1.0-110	1.0	110	110	112	18	12	24	100	9	229	78
555520	ZCP-1.0-120	1.0	120	120	122	18	12	24	105	9	249.8	96
555530	ZCP-1.0-130	1.0	130	130	132	18	12	24	119	9	270.5	105
555540	ZCP-1.0-140	1.0	140	140	142	18	12	24	125	9	291.4	125

\* Pitch diameter.

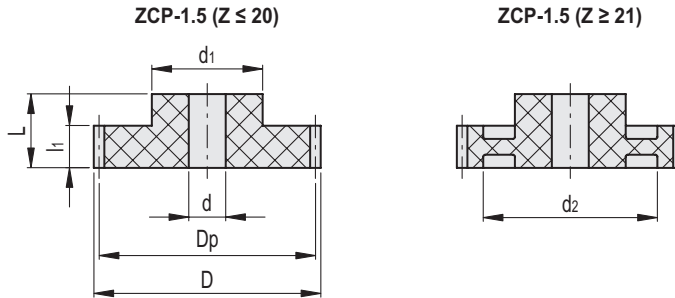




ZCP-1.25

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖
555612	ZCP-1.25-12	1.25	12	15	17.5	19	5	10	-	10	43.3	3
555615	ZCP-1.25-15	1.25	15	18.75	21.25	19	5	10	-	10	54.1	4
555620	ZCP-1.25-20	1.25	20	25	27.5	19	5	12	16	10	72.2	7
555625	ZCP-1.25-25	1.25	25	31.25	33.75	19	6	15	21	10	90.3	12
555630	ZCP-1.25-30	1.25	30	37.5	40	19	8	18	29	10	108.4	14
555635	ZCP-1.25-35	1.25	35	43.75	46.25	19	8	18	29	10	126.5	20
555640	ZCP-1.25-40	1.25	40	50	52.5	19	8	18	40	10	144.5	23
555650	ZCP-1.25-50	1.25	50	62.5	65	19	8	21	46	10	180.6	38
555660	ZCP-1.25-60	1.25	60	75	77.5	19	10	21	66	10	216.8	44.95
555670	ZCP-1.25-70	1.25	70	87.5	90	19	10	21	76	10	253	61
555680	ZCP-1.25-80	1.25	80	100	102.5	19	12	24	86	10	289.1	80
555700	ZCP-1.25-100	1.25	100	125	127.5	19	12	24	108	10	361.4	121

\* Pitch diameter.



ZCP-1.5

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖
555812	ZCP-1.5-12	1.5	12	18	21	23	6	12	-	12	75	5
555813	ZCP-1.5-13	1.5	13	19.5	22.5	23	6	14	-	12	81.1	7
555814	ZCP-1.5-14	1.5	14	21	24	23	6	14	-	12	87.4	7
555815	ZCP-1.5-15	1.5	15	22.5	25.5	23	6	14	-	12	93.7	8
555816	ZCP-1.5-16	1.5	16	24	27	23	6	14	-	12	100	9
555817	ZCP-1.5-17	1.5	17	25.5	28.5	23	6	14	-	12	106.2	10
555818	ZCP-1.5-18	1.5	18	27	30	23	8	17	-	12	112.3	12
555819	ZCP-1.5-19	1.5	19	28.5	31.5	23	8	17	-	12	118.7	13
555820	ZCP-1.5-20	1.5	20	30	33	23	8	17	-	12	124.8	14
555821	ZCP-1.5-21	1.5	21	31.5	34.5	23	8	17	23	12	131.1	13
555822	ZCP-1.5-22	1.5	22	33	36	23	8	17	23	12	137.3	14
555823	ZCP-1.5-23	1.5	23	34.5	37.5	23	8	17	23	12	143.6	16
555824	ZCP-1.5-24	1.5	24	36	39	23	8	19	27	12	149.8	17
555825	ZCP-1.5-25	1.5	25	37.5	40.5	23	8	19	27	12	156.1	18

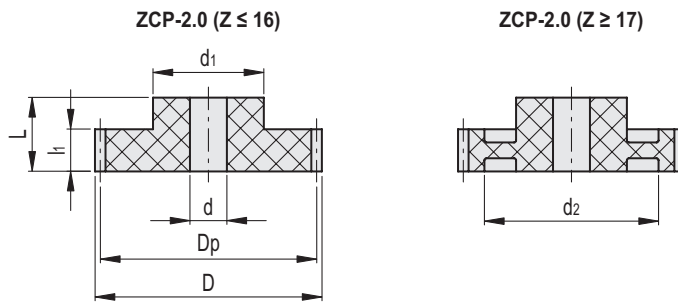


Joints, Couplings, Gears 10

ZCP-1.5

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	Max. torque [Ncm]	⚖
555826	ZCP-1.5-26	1.5	26	39	42	23	8	19	27	12	162.3	20
555827	ZCP-1.5-27	1.5	27	40.5	43.5	23	8	19	27	12	168.6	22
555828	ZCP-1.5-28	1.5	28	42	45	23	8	19	27	12	174.8	23
555830	ZCP-1.5-30	1.5	30	45	48	23	10	24	34	12	187.2	27
555832	ZCP-1.5-32	1.5	32	48	51	23	10	24	34	12	200	31
555835	ZCP-1.5-35	1.5	35	52.5	55.5	23	10	24	42	12	218.5	32
555836	ZCP-1.5-36	1.5	36	54	57	23	10	24	42	12	224.8	34
555838	ZCP-1.5-38	1.5	38	57	60	23	10	24	42	12	237.3	38
555840	ZCP-1.5-40	1.5	40	60	63	23	10	24	48	12	249.8	39
555842	ZCP-1.5-42	1.5	42	63	66	23	10	24	48	12	262.3	44
555843	ZCP-1.5-43	1.5	43	64.5	67.5	23	10	24	48	12	266.8	46
555845	ZCP-1.5-45	1.5	45	67.5	70.5	23	10	24	48	12	281	52
555848	ZCP-1.5-48	1.5	48	72	75	23	10	24	48	12	299.7	60
555850	ZCP-1.5-50	1.5	50	75	78	23	12	27	63	12	312.2	55
555852	ZCP-1.5-52	1.5	52	78	81	23	12	27	63	12	324.7	61
555854	ZCP-1.5-54	1.5	54	81	84	23	12	27	63	12	337.2	67
555855	ZCP-1.5-55	1.5	55	82.5	85.5	23	12	27	63	12	343.5	70
555860	ZCP-1.5-60	1.5	60	90	93	23	12	27	70	12	374.6	80
555870	ZCP-1.5-70	1.5	70	105	108	23	14	30	90	12	437.2	96
555880	ZCP-1.5-80	1.5	80	120	123	23	14	30	105	12	499.6	118
555890	ZCP-1.5-90	1.5	90	135	138	23	14	30	119	12	562	144
555900	ZCP-1.5-100	1.5	100	150	153	34	20	40	132	19	989	272
555910	ZCP-1.5-110	1.5	110	165	168	34	20	40	150	19	1087.8	256
555920	ZCP-1.5-120	1.5	120	180	183	34	20	40	163	19	1186.7	301
555930	ZCP-1.5-130	1.5	130	195	198	34	20	40	180	19	1285.5	329
555940	ZCP-1.5-140	1.5	140	210	213	34	20	40	193	19	1384.4	381
555950	ZCP-1.5-150	1.5	150	225	228	34	20	40	208	19	1483.3	425

\* Pitch diameter.



ZCP-2.0

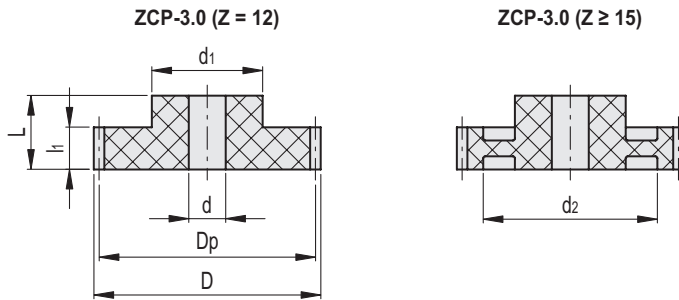
Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d <sub>1</sub>	d <sub>2</sub>	l <sub>1</sub>	Max. torque [Ncm]	⚖
556012	ZCP-2.0-12	2.0	12	24	28	27	8	18	-	15	166.5	12
556013	ZCP-2.0-13	2.0	13	26	30	27	8	18	-	15	180.4	13
556014	ZCP-2.0-14	2.0	14	28	32	27	8	18	-	15	194.2	15
556015	ZCP-2.0-15	2.0	15	30	34	27	8	18	-	15	208.1	17
556016	ZCP-2.0-16	2.0	16	32	36	27	8	18	-	15	222	19
556017	ZCP-2.0-17	2.0	17	34	38	27	8	18	23	15	236	19
556018	ZCP-2.0-18	2.0	18	36	40	27	8	18	23	15	249.8	21
556019	ZCP-2.0-19	2.0	19	38	42	27	8	18	23	15	263.7	24
556020	ZCP-2.0-20	2.0	20	40	44	27	10	20	26	15	277.6	26



ZCP-2.0

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖
556021	ZCP-2.0-21	2.0	21	42	46	27	10	20	26	15	291.4	28
556022	ZCP-2.0-22	2.0	22	44	48	27	10	20	26	15	305.3	32
556023	ZCP-2.0-23	2.0	23	46	50	27	10	24	35	15	319.2	33
556024	ZCP-2.0-24	2.0	24	48	52	27	10	24	35	15	333.1	36
556025	ZCP-2.0-25	2.0	25	50	54	27	10	24	35	15	347	39
556026	ZCP-2.0-26	2.0	26	52	56	27	10	24	38	15	360.7	40
556027	ZCP-2.0-27	2.0	27	54	58	27	10	24	38	15	374.6	44
556028	ZCP-2.0-28	2.0	28	56	60	27	10	24	38	15	388.5	47
556030	ZCP-2.0-30	2.0	30	60	64	27	10	24	44	15	416.3	50
556032	ZCP-2.0-32	2.0	32	64	68	27	10	24	44	15	444	59
556035	ZCP-2.0-35	2.0	35	70	74	27	12	26	54	15	485.7	63
556036	ZCP-2.0-36	2.0	36	72	76	27	12	26	54	15	499.6	68
556038	ZCP-2.0-38	2.0	38	76	80	27	12	26	61	15	527.3	70
556040	ZCP-2.0-40	2.0	40	80	84	27	12	26	61	15	555.1	81
556042	ZCP-2.0-42	2.0	42	84	88	27	12	26	61	15	583	91
556045	ZCP-2.0-45	2.0	45	90	94	27	14	30	70	15	624.5	100
556048	ZCP-2.0-48	2.0	48	96	100	27	14	30	76	15	666.2	109
556050	ZCP-2.0-50	2.0	50	100	104	27	14	30	80	15	694	116
556055	ZCP-2.0-55	2.0	55	110	114	27	14	30	90	15	763.2	134
556060	ZCP-2.0-60	2.0	60	120	124	27	14	30	100	15	832.7	153
556070	ZCP-2.0-70	2.0	70	140	144	27	14	30	120	15	971.5	195
556075	ZCP-2.0-75	2.0	75	150	154	34	20	40	132	19	1318.5	272
556080	ZCP-2.0-80	2.0	80	160	164	34	20	40	139	19	1406.3	270
556085	ZCP-2.0-85	2.0	85	170	174	34	20	40	150	19	1494.2	291
556090	ZCP-2.0-90	2.0	90	180	184	34	20	40	163	19	1582.2	301
556095	ZCP-2.0-95	2.0	95	190	194	34	20	40	163	19	1670.1	379
556100	ZCP-2.0-100	2.0	100	200	204	34	20	40	180	19	1758	370
556110	ZCP-2.0-110	2.0	110	220	224	34	20	40	193	19	1933.8	472

\* Pitch diameter.



ZCP-3.0

Code	Description	Module M	No. of teeth Z	Dp*	D	L	d	d1	d2	l1	Max. torque [Ncm]	⚖
556212	ZCP-3.0-12	3.0	12	36	42	34	12	24	-	19	474.6	31
556215	ZCP-3.0-15	3.0	15	45	51	34	12	24	30	19	593.3	42
556220	ZCP-3.0-20	3.0	20	60	66	34	12	24	38	19	791	68
556225	ZCP-3.0-25	3.0	25	75	81	34	14	28	58	19	989	97
556230	ZCP-3.0-30	3.0	30	90	96	34	14	28	68	19	1186.7	128
556235	ZCP-3.0-35	3.0	35	105	111	34	16	32	79	19	1384.4	167
556240	ZCP-3.0-40	3.0	40	120	126	34	16	32	94	19	1582.2	204
556250	ZCP-3.0-50	3.0	50	150	156	34	20	40	132	19	1977.7	270
556260	ZCP-3.0-60	3.0	60	180	186	34	20	40	163	19	2373.3	300
556270	ZCP-3.0-70	3.0	70	210	216	34	20	40	193	19	2768.8	380
556275	ZCP-3.0-75	3.0	75	225	231	34	20	40	208	19	2966.6	423

\* Pitch diameter.