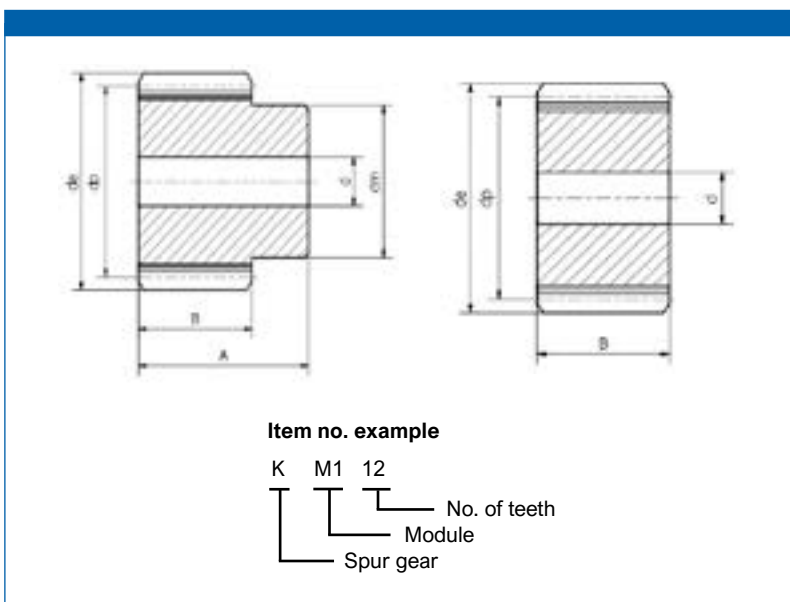


Spur gears

Material C45, Q-ISO 1328 (8)

Module	Width A [mm]	Width B [mm]	Pressure Angle	Hardening
1	25	15	20°	No
1,5	30	17	20°	No
2	35	20	20°	No
2,5	40	25	20°	No
3	50	30	20°	No
4	60	40	20°	No
5	75	50	20°	No
6	80	60	20°	No



Number of teeth, Z	Module 1					Module 1,5					Module 2					Module 2,5				
	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type
12	14	12	9	6	with hub	21	18	14	8	with hub	28	24	18	10	with hub	35	30	22	10	with hub
13	15	13	10	6	with hub	22,5	19,5	14	8	with hub	30	26	19	10	with hub	37,5	32,5	25	10	with hub
14	16	14	10	6	with hub	24	21	18	8	with hub	32	28	20	10	with hub	40	35	28	10	with hub
15	17	15	12	6	with hub	25,5	22,5	18	8	with hub	34	30	22	10	with hub	42,5	37,5	30	10	with hub
16	18	16	13	6	with hub	27	24	20	8	with hub	36	32	24	10	with hub	45	40	32	10	with hub
17	19	17	14	8	with hub	28,5	25,5	20	8	with hub	38	34	25	10	with hub	47,5	42,5	35	12	with hub
18	20	18	15	8	with hub	30	27	20	8	with hub	40	36	25	10	with hub	50	45	35	12	with hub
19	21	19	15	8	with hub	31,5	28,5	20	8	with hub	42	38	25	10	with hub	52,5	47,5	35	12	with hub
20	22	20	16	8	with hub	33	30	25	8	with hub	44	40	30	10	with hub	55	50	40	12	with hub
21	23	21	16	8	with hub	34,5	31,5	25	10	with hub	46	42	30	12	with hub	57,5	52,5	40	14	with hub
22	24	22	18	8	with hub	36	33	25	10	with hub	48	44	30	12	with hub	60	55	45	14	with hub
23	25	23	18	8	with hub	37,5	34,5	25	10	with hub	50	46	30	12	with hub	62,5	57,5	45	14	with hub
24	26	24	20	8	with hub	39	36	25	10	with hub	52	48	35	12	with hub	65	60,45	45	14	with hub
25	27	25	20	8	with hub	40,5	37,5	25	10	with hub	54	50	35	12	with hub	67,5	62,5	50	14	with hub
26	28	26	20	8	with hub	42	39	30	12	with hub	56	52	40	12	with hub	70	65	50	14	with hub
27	29	27	20	8	with hub	43,5	40,5	30	12	with hub	58	54	40	12	with hub	72,5	67,5	50	14	with hub
28	30	28	20	8	with hub	45	42	30	12	with hub	60	56	40	12	with hub	75	70	50	14	with hub
29	31	29	20	8	with hub	46,5	43,5	30	12	with hub	62	58	40	14	with hub	77,5	72,5	50	14	with hub
30	32	30	20	8	with hub	48	45	30	12	with hub	64	60	40	14	with hub	80	75	55	16	with hub
31	33	31	25	10	with hub	49,5	46,5	35	12	with hub	66	62	45	14	with hub	82,5	77,5	55	16	with hub
32	34	32	25	10	with hub	51	48	35	12	with hub	68	64	45	14	with hub	85	80	55	16	with hub
33	35	33	25	10	with hub	52,5	49,5	35	12	with hub	70	66	45	14	with hub	87,5	82,5	55	16	with hub
34	36	34	25	10	with hub	54	51	35	12	with hub	72	68	45	14	with hub	90	85	55	16	with hub
35	37	35	25	10	with hub	55,5	52,5	35	12	with hub	74	70	45	14	with hub	92,5	87,5	60	16	with hub
36	38	36	25	10	with hub	57	54	35	12	with hub	76	72	45	14	with hub	95	90	60	16	with hub
37	39	37	25	10	with hub	58,5	55,5	40	12	with hub	78	74	50	14	with hub	97,5	92,5	60	16	with hub
38	40	38	25	10	with hub	60	57	40	12	with hub	80	76	50	14	with hub	100	95	60	16	with hub
39	41	39	25	10	with hub	61,5	58,5	40	12	with hub	82	78	50	14	with hub	105,5	97,5	60	16	with hub
40	42	40	25	10	with hub	63	60	40	12	with hub	84	80	50	14	with hub	105	100	70	20	with hub
45	47	45	30	10	with hub	70,5	67,5	50	14	with hub	94	90	60	16	with hub	117,5	112,5	70	20	with hub
48	50	48	30	10	with hub	75	72	50	14	with hub	100	96	70	16	with hub	125	120	80	20	with hub
50	52	50	30	12	with hub	78	75	50	14	with hub	104	100	70	16	with hub	130	125	80	20	with hub
54	56	54	40	12	with hub	84	81	60	15	with hub	112	108	70	16	with hub	155	150	100	20	with hub
60	62	60	40	12	with hub	93	90	60	15	with hub	124	120	70	20	with hub					
64	66	64	50	12	with hub	99	96	70	20	with hub	132	128	80	20	with hub					
72	74	72	-	12	no hub	111	108	-	20	no hub										
80	82	80	-	12	no hub	123	120	-	20	no hub										
114	116	114	-	12	no hub	174	171	-	20	no hub										

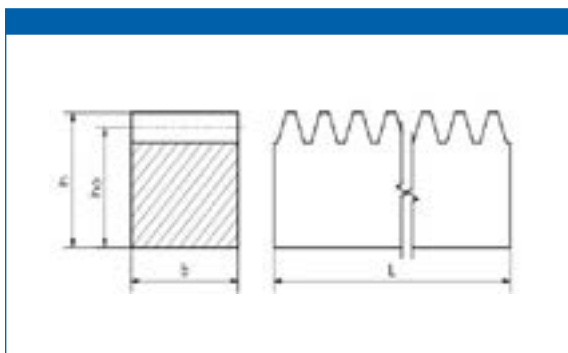
Spur gears

Material C45, Q-ISO 1328 (8)

Number of teeth, Z	Module 3					Module 4					Module 5					Module 6				
	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type	de, [mm]	dp, [mm]	dm, [mm]	d, [mm]	Type
12	42	36	25	12	with hub	56	48	35	14	with hub	70	60	45	20	with hub	84	72	54	20	with hub
13	45	39	25	12	with hub	60	52	40	14	with hub	75	65	50	20	with hub	90	78	60	20	with hub
14	48	42	30	12	with hub	64	56	45	14	with hub	80	70	55	20	with hub					
15	51	45	35	12	with hub	68	60	45	14	with hub	85	75	60	20	with hub	102	90	70	20	with hub
16	54	48	38	15	with hub	72	64	50	15	with hub	90	80	65	20	with hub	108	96	75	20	with hub
17	57	51	42	15	with hub	76	68	50	15	with hub	95	85	70	20	with hub					
18	60	54	45	15	with hub	80	72	50	15	with hub	100	90	70	20	with hub	120	108	80	20	with hub
19	63	57	45	15	with hub	84	76	60	15	with hub	105	95	70	20	with hub					
20	66	25	45	15	with hub	88	80	60	15	with hub	110	100	80	20	with hub	132	120	90	20	with hub
21	69	63	45	15	with hub	92	84	70	20	with hub	115	105	80	20	with hub					
22	72	66	50	15	with hub	96	88	70	20	with hub	120	110	80	20	with hub					
23	75	69	50	15	with hub															
24	78	72	50	16	with hub	104	96	75	20	with hub	130	120	90	25	with hub	156	144	110	25	with hub
25	81	75	60	16	with hub	108	100	75	20	with hub	135	125	90	20	with hub	162	150	110	25	with hub
26	84	78	60	16	with hub	112	104	75	20	with hub	140	130	100	20	with hub					
27	87	71	60	16	with hub	116	108	75	20	with hub	145	135	100	20	with hub					
28	90	84	60	16	with hub	120	112	75	20	with hub	150	140	100	25	with hub	180	162	-	25	with hub
29	93	87	60	16	with hub	124	116	75	20	with hub										
30	96	90	60	16	with hub	128	120	75	20	with hub	160	150	100	25	with hub	192	180	-	25	no hub
31	99	93	70	20	with hub															
32	102	96	70	20	with hub	136	128	80	20	with hub	170	160	-	25	no hub	204	192	-	25	no hub
33	105	99	70	20	with hub															
34	108	102	70	20	with hub	144	136	80	20	with hub										
35	111	105	70	20	with hub	148	140	80	20	with hub	185	175	-	25	no hub	222	210	-	25	no hub
36	114	108	70	20	with hub	152	144	80	25	with hub										
37	117	111	80	20	with hub															
38	120	114	80	20	with hub	160	152	-	25	no hub	200	190	-	25	no hub	240	228	-	25	no hub
39	123	117	80	20	with hub															
40	126	120	80	20	with hub	168	160	-	25	no hub	210	200	-	30	no hub					
45	141	135	90	20	with hub	188	180	-	25	no hub	235	225	-	30	no hub					
48	150	144	100	20	with hub	200	192	-	25	no hub	250	240	-	30	no hub					
50	156	150	100	25	with hub	208	200	-	25	no hub	260	250	-	30	no hub					
54																				
60	186	180	-	25	no hub	248	240	-	25	no hub	310	300	-	30	no hub					
64																				
72	222	216	-	25	no hub															
80	246	240	-	25	no hub	328	320	-	25	no hub	410	400	-	30	no hub					
95	291	285	-	25	no hub															

Gear Racks

Material C45, Q-ISO 1328 (8)



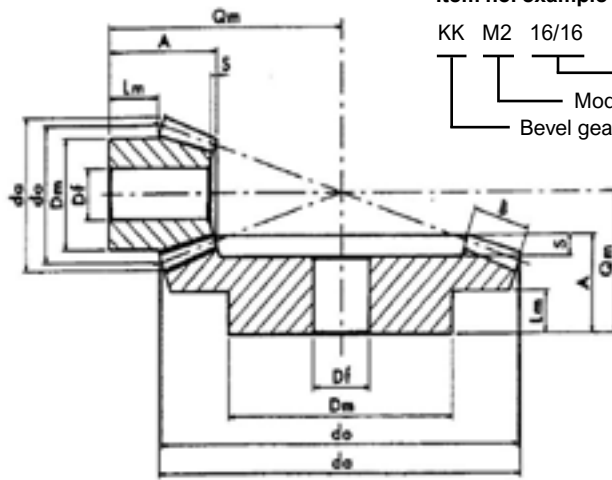
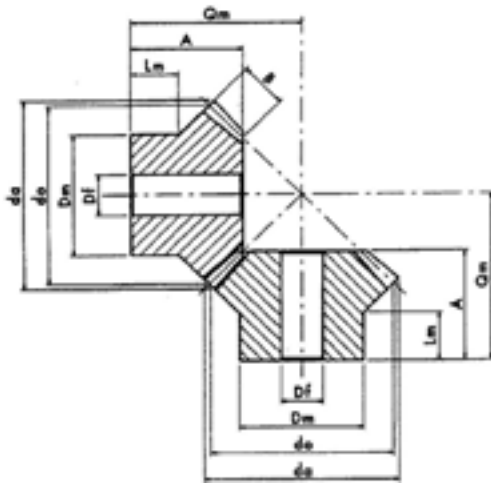
Item No. [JENS S]	Number of teeth, Z	Module	Width B, [mm]	Height H, [mm]	Pitch height Ho, [mm]	Length L, [mm]	Weight [kg/L]	Splicable
KSM1-2	637	M1	15	15	14	2001,2	3,05	yes
KSM1,5-2	425	M1,5	17	17	15,5	2002,7	3,83	yes
KSM2-2	319	M2	20	20	18	2004,3	5,115	yes
KSM2,5-2	255	M2,5	25	25	22,5	2002,7	7,35	yes
KSM3-2	213	M3	30	30	27	2007,5	11,47	yes
KSM4-2	160	M4	40	40	36	2010,6	20,35	yes
KSM5-2	127	M5	50	50	45	1995,0	29,415	yes
KSM6-2	106	M6	60	60	54	1998,0	50,2	yes

Bevel gears

Material C45, Pressure angle 20°, Q-ISO 1328 (8), without hardening.

1:1

1:2 - 1:4



Item no. example

KK M2 16/16

No. of teeth

Module

Bevel gear

Ratio	Module	Z1	Z2	do1, [mm]	do2, [mm]	da1, [mm]	da2, [mm]	Dm1, [mm]	Dm2, [mm]	Df1, [mm]	Df2, [mm]	B, [mm]	Lm1, [mm]	Lm2, [mm]	A1, [mm]	A2, [mm]	S1, [mm]	S2, [mm]	Qm1, [mm]	Qm2, [mm]	Tolerance	QM
																					min	max
1:1	M1,5	16	16	24	-	26,1	-	18	-	8	-	6	12	-	18,9	-	2	-	26	-	-0,02	0,02
	M1,5	20	20	30	-	32,1	-	22	-	10	-	10	8,5	-	20	-	2	-	27,4	-	-0,02	0,02
	M1,5	22	22	33	-	35,1	-	25	-	10	-	10	9,7	-	20	-	2	-	30,2	-	-0,02	0,02
	M1,5	25	25	37,5	-	39,6	-	28	-	10	-	10	12	-	23	-	2	-	34,1	-	-0,03	0,03
	M1,5	30	30	45	-	47,1	-	30	-	12	-	12	12	-	25	-	2,5	-	38,4	-	-0,03	0,03
	M2	16	16	32	-	34,8	-	25	-	10	-	8	14	-	23,5	-	3	-	33	-	-0,02	0,02
	M2	20	20	40	-	42,8	-	32	-	10	-	12	12	-	25	-	3	-	35,8	-	-0,03	0,03
	M2	22	22	44	-	46,8	-	36	-	10	-	12	11,7	-	25	-	3	-	37,7	-	-0,03	0,03
	M2	25	25	50	-	52,8	-	40	-	12	-	14	12,3	-	28	-	3	-	42,3	-	-0,03	0,03
	M2	30	30	60	-	62,8	-	50	-	12	-	16	12,8	-	30	-	3	-	47,8	-	-0,03	0,03
	M2,5	16	16	40	-	43,5	-	30	-	12	-	10	15	-	28,1	-	3,5	-	40	-	-0,03	0,03
	M2,5	20	20	50	-	53,5	-	40	-	12	-	12	16	-	30,5	-	3,5	-	45,9	-	-0,03	0,03
	M2,5	22	22	55	-	58,5	-	45	-	12	-	12	15,9	-	30,5	-	3,5	-	48,3	-	-0,03	0,03
	M2,5	25	25	62,5	-	66	-	50	-	15	-	15	16	-	33,5	-	3,5	-	53	-	-0,03	0,03
	M2,5	30	30	75	-	78,5	-	55	-	15	-	18	16	-	35,5	-	3,5	-	59,1	-	-0,03	0,03
	M3	16	16	48	-	52,2	-	40	-	15	-	12	18	-	31,7	-	4	-	46	-	-0,03	0,03
	M3	20	20	60	-	64,2	-	45	-	15	-	18	13,6	-	35	-	4	-	51	-	-0,03	0,03
	M3	22	22	66	-	70,2	-	50	-	15	-	18	13	-	35	-	4	-	54	-	-0,03	0,03
M3	25	25	75	-	79,2	-	55	-	15	-	20	16	-	38	-	4	-	60	-	-0,03	0,03	
M3	30	30	90	-	94,2	-	60	-	20	-	22	17	-	40	-	4	-	68	-	-0,04	0,04	
1:2	M1,5	16	32	24	48	26,7	49,3	21	32	10	12	8	11,3	10	19,5	20	1,5	3	35,8	27,5	-0,03	0,03
	M2	16	32	32	64	35,6	65,8	26	40	10	12	10	12,2	10	23	25	2	4	45,4	32,2	-0,03	0,03
	M2,5	16	32	40	80	44,4	82,2	34	50	12	15	12	14,4	10	27,5	25	2,5	5	55,9	39,1	-0,03	0,03
	M3	16	32	48	96	53,4	98,7	40	60	15	15	15	11,6	10	28	30	3	6	61,6	45,3	-0,04	0,04
1:3	M1,5	16	48	24	72	26,9	72,9	20	50	10	15	12	11,7	10	24	20	1	3	46,4	27,3	-0,04	0,04
	M2	16	48	32	96	35,8	97,3	26	60	12	15	15	12,4	10	28,5	23	1,5	4	61,8	32,9	-0,04	0,04
	M2,5	16	48	40	120	44,7	121,6	32	70	12	20	18	13	10	32	26	2	5	74,4	39,2	-0,05	0,05
	M3	16	48	48	144	53,7	145,9	40	80	15	20	18	12,1	10	32	29	2	6	86,3	45,2	-0,05	0,05
1:4	M1,5	16	64	24	96	26,9	96,7	18	70	10	45	12	12,2	10	25	22	1	3	61	30,5	-0,05	0,05
	M2	16	64	32	128	35,9	129	25	80	12	20	15	8,2	10	24		1	4	7,1	35,8	-0,05	0,05
	M2,5	16	64	40	160	44,9	161,2	30	90	15	20	18	8,2	10	30,5	29	1,5	5	91,5	32,8	-0,06	0,06
	M3	16	64	48	192	53,8	193,5	40	100	15	20	22	11	10	34	30	2	6	108,1	46,4	-0,06	0,06