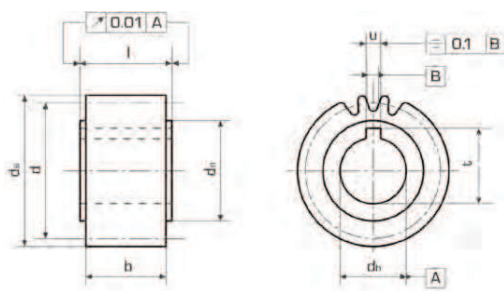


## Stirnräder mit geschliffenen Zahnflanken, geradeverzahnt

### Spur Gears with Straight Ground Teeth



Modul | module **2,0**

Verzahnungsqualität | toothing quality **7 e25**

geradverzahnt | straight teeth

Eingriffswinkel | pressure angle **20°**

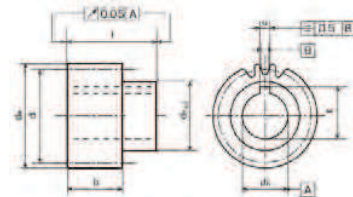
einsatzgehärtet | case hardened

Material | material **1.7131**

**[16MnCr5]**

Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
16	36,0	32,0	15	25	28	30	5	17,3	113-120-516
18	40,0	36,0	20	25	28	30	6	22,8	113-220-018
20	44,0	40,0	20	30	28	30	6	22,8	113-220-020
22	48,0	44,0	15	25	28	30	5	17,3	113-120-522
22	48,0	44,0	20	30	28	30	6	22,8	113-220-022
22	48,0	44,0	25	36	28	30	8	28,3	113-220-522
25	54,0	50,0	20	30	28	30	6	22,8	113-220-025
25	54,0	50,0	25	36	28	30	8	28,3	113-220-525
25	54,0	50,0	30	45	28	30	8	33,3	113-320-025
28	60,0	56,0	20	30	28	30	6	22,8	113-220-028
28	60,0	56,0	25	36	28	30	8	28,3	113-220-528
28	60,0	56,0	30	45	28	30	8	33,3	113-320-028
28	60,0	56,0	35	48	28	30	10	38,3	113-320-528
32	68,0	64,0	20	30	28	30	6	22,8	113-220-032
32	68,0	64,0	25	36	28	30	8	28,3	113-220-532
32	68,0	64,0	30	45	28	30	8	33,3	113-320-032
32	68,0	64,0	35	48	28	30	10	38,3	113-320-532
36	76,0	72,0	25	36	28	30	8	28,3	113-220-536
36	76,0	72,0	30	45	28	30	8	33,3	113-320-036
36	76,0	72,0	35	48	28	30	10	38,3	113-320-536
36	76,0	72,0	45	58	28	30	14	48,8	113-420-536
40	84,0	80,0	25	36	28	30	8	28,3	113-220-540
40	84,0	80,0	30	45	28	30	8	33,3	113-320-040
40	84,0	80,0	35	48	28	30	10	38,3	113-320-540
40	84,0	80,0	45	58	28	30	14	48,8	113-420-540
45	94,0	90,0	35	48	28	30	10	38,3	113-320-545
45	94,0	90,0	45	58	28	30	14	48,8	113-420-545
50	104,0	100,0	35	48	28	30	10	38,3	113-320-550
50	104,0	100,0	45	58	28	30	14	48,8	113-420-550

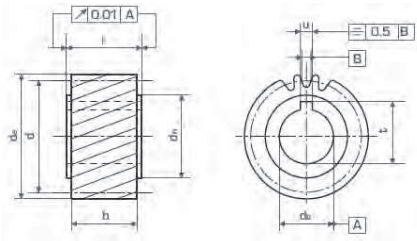
mit Nabe | with hub



Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	44,0	40,0	19	30	28	56	6	21,8	115-120-920
20	44,0	40,0	22	36	28	56	6	24,8	115-220-220
22	48,0	44,0	19	30	28	56	6	21,8	115-120-922
22	48,0	44,0	22	36	28	56	6	24,8	115-220-222
25	54,0	50,0	16	30	28	54	5	18,3	115-120-625
25	54,0	50,0	19	30	28	56	6	21,8	115-120-925
25	54,0	50,0	22	36	28	56	6	24,8	115-220-225
28	60,0	56,0	19	30	28	56	6	21,8	115-120-928
28	60,0	56,0	30	50	28	60	8	33,3	115-320-028
32	68,0	64,0	16	30	28	54	5	18,3	115-120-632
32	68,0	64,0	22	36	28	56	6	24,8	115-220-232
32	68,0	64,0	30	50	28	60	8	33,3	115-320-032
32	68,0	64,0	32	55	28	65	10	35,3	115-320-232
36	76,0	72,0	40	62	28	65	12	43,3	115-420-036
40	84,0	80,0	32	55	28	65	10	35,3	115-320-240
40	84,0	80,0	40	62	28	65	12	43,3	115-420-040
40	84,0	80,0	45	68	28	65	14	48,8	115-420-540
50	104,0	100,0	45	68	28	65	14	48,8	115-420-550



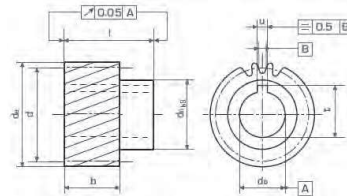
## Stirnräder mit geschliffenen Zahnflanken, schrägverzahnt Spur Gears with Ground Teeth, Helical



**Modul | module** **2,0**  
 Verzahnungsqualität | toothing quality **7 e25**  
 schrägverzahnt, linkssteigend | helical, left hand **19° 31' 42''**  
 Schrägungswinkel | helix angle **20°**  
 Eingriffswinkel | pressure angle  
 einsatzgehärtet | case hardened  
 Material | material **1.7131**  
**[16MnCr5]**

Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	46,4	42,44	20	30	28	30	6	22,8	123-220-020
25	57,1	53,05	20	30	28	30	6	22,8	123-220-025
25	57,1	53,05	25	36	28	30	8	28,3	123-220-525
28	63,4	59,42	35	48	28	30	10	38,3	123-320-528
30	67,7	63,66	25	36	28	30	8	28,3	123-220-530
30	67,7	63,66	30	45	28	30	8	33,3	123-320-030
32	71,9	67,91	20	30	28	30	6	22,8	123-220-032
32	71,9	67,91	25	36	28	30	8	28,3	123-220-532
32	71,9	67,91	35	48	28	30	10	38,3	123-320-532
36	80,4	76,39	35	48	28	30	10	38,3	123-320-536
40	88,9	84,88	35	48	28	30	10	38,3	123-320-540

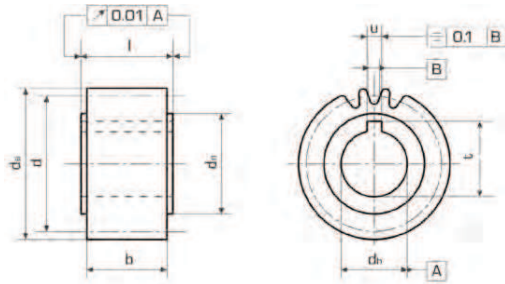
mit Nabe | with hub



Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	46,4	42,44	19	30	28	56	6	21,8	125-120-920
20	46,4	42,44	22	36	28	56	6	24,8	125-220-220
21	48,6	44,56	22	36	28	56	6	24,8	125-220-221
22	50,6	46,69	19	30	28	56	6	21,8	125-120-922
22	50,6	46,69	22	36	28	56	6	24,8	125-220-222
25	57,0	53,05	19	30	28	56	6	21,8	125-120-925
25	57,0	53,05	22	36	28	56	6	24,8	125-220-225
28	63,4	59,42	19	30	28	56	6	21,8	125-120-928
28	63,4	59,42	22	36	28	56	6	24,8	125-220-228
30	67,7	63,66	22	36	28	56	6	24,8	125-220-230
30	67,7	63,66	30	50	28	60	8	33,3	125-320-030
30	67,7	63,66	32	55	28	65	10	35,3	125-320-230
32	71,9	67,91	22	36	28	56	6	24,8	125-220-232
39	86,8	82,76	32	55	28	65	10	35,3	125-320-239

## Stirnräder mit geschliffenen Zahnflanken, geradverzahnt

### Spur Gears with Straight Ground Teeth



Modul | module **3,0**

Verzahnungsqualität | toothing quality **7 e25**

geradverzahnt | straight teeth

Eingriffswinkel | pressure angle **20°**

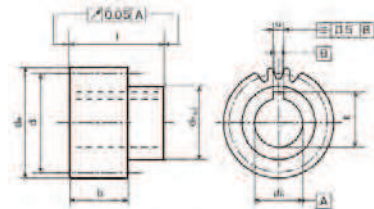
einsatzgehärtet | case hardened

Material | material **1.7131**

**[16MnCr5]**

Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
18	60,0	54,0	25	36	28	30	8	28,3	113-230-518
20	66,0	60,0	25	36	28	30	8	28,3	113-230-520
20	66,0	60,0	30	45	28	30	8	33,3	113-330-020
20	66,0	60,0	35	48	28	30	10	38,3	113-330-520
22	72,0	66,0	25	36	28	30	8	28,3	113-230-522
22	72,0	66,0	30	45	28	30	8	33,3	113-330-022
22	72,0	66,0	35	48	28	30	10	38,3	113-330-522
25	81,0	75,0	25	36	28	30	8	28,3	113-230-525
25	81,0	75,0	30	45	28	30	8	33,3	113-330-025
25	81,0	75,0	35	48	28	30	10	38,3	113-330-525
25	81,0	75,0	45	58	28	30	14	48,8	113-430-525
28	90,0	84,0	25	36	28	30	8	28,3	113-230-528
28	90,0	84,0	30	45	28	30	8	33,3	113-330-028
28	90,0	84,0	35	48	28	30	10	38,3	113-330-528
28	90,0	84,0	45	58	28	30	14	48,8	113-430-528
32	102,0	96,0	25	36	28	30	8	28,3	113-230-532
32	102,0	96,0	30	45	28	30	8	33,3	113-330-032
32	102,0	96,0	35	48	28	30	10	38,3	113-330-532
32	102,0	96,0	45	58	28	30	14	48,8	113-430-532
36	114,0	108,0	35	48	28	30	10	38,3	113-330-536
36	114,0	108,0	45	58	28	30	14	48,8	113-430-536
40	126,0	120,0	35	48	28	30	10	38,3	113-330-540
40	126,0	120,0	45	58	28	30	14	48,8	113-430-540

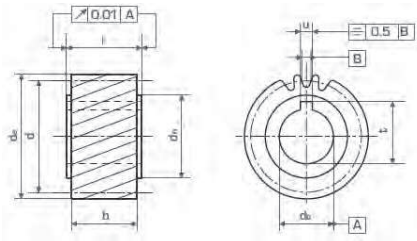
mit Nabe | with hub



Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
22	72,0	66,0	22	36	28	56	6	24,8	115-230-222
22	72,0	66,0	25	44	28	60	8	28,3	115-230-522
22	72,0	66,0	30	50	28	60	8	33,3	115-330-022
22	72,0	66,0	32	55	28	65	10	35,3	115-330-222
22	72,0	66,0	35	55	28	65	10	38,3	115-330-522
22	72,0	66,0	40	62	28	65	12	43,3	115-430-022
25	81,0	75,0	32	55	28	65	10	35,3	115-330-225
25	81,0	75,0	40	62	28	65	12	43,3	115-430-025
28	90,0	84,0	22	36	28	56	6	24,8	115-230-228
28	90,0	84,0	25	44	28	60	8	28,3	115-230-528
28	90,0	84,0	30	50	28	60	8	33,3	115-330-028
28	90,0	84,0	32	55	28	65	10	35,3	115-330-228
28	90,0	84,0	35	55	28	65	10	38,3	115-330-528
28	90,0	84,0	40	62	28	65	12	43,3	115-430-028
28	90,0	84,0	45	68	28	65	14	48,8	115-430-528
32	102,0	96,0	32	55	28	65	10	35,3	115-330-232
32	102,0	96,0	40	62	28	65	12	43,3	115-430-032
36	114,0	108,0	45	68	28	65	14	48,8	115-430-536



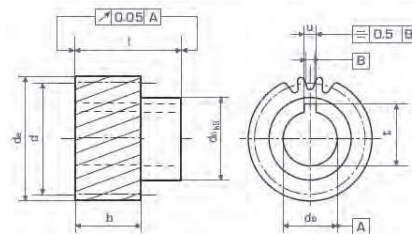
## Stirnräder mit geschliffenen Zahnflanken, schrägverzahnt Spur Gears with Ground Teeth, Helical



**Modul | module** **3,0**  
 Verzahnungsqualität | toothing quality **7 e25**  
 schrägverzahnt, linkssteigend | helical, left hand **19° 31' 42''**  
 Schrägungswinkel | helix angle **20°**  
 Eingriffswinkel | pressure angle  
 einsatzgehärtet | case hardened  
 Material | material **1.7131 [16MnCr5]**

Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	69,7	63,66	30	45	28	30	8	33,3	123-330-020
20	69,7	63,66	35	48	28	30	10	38,3	123-330-520
22	76,0	70,03	25	36	28	30	8	28,3	123-230-522
22	76,0	70,03	30	45	28	30	8	33,3	123-330-022
22	76,0	70,03	35	48	28	30	10	38,3	123-330-522
25	85,6	79,58	25	36	28	30	8	28,3	123-230-525
25	85,6	79,58	30	45	28	30	8	33,3	123-330-025
25	85,6	79,58	35	48	28	30	10	38,3	123-330-525

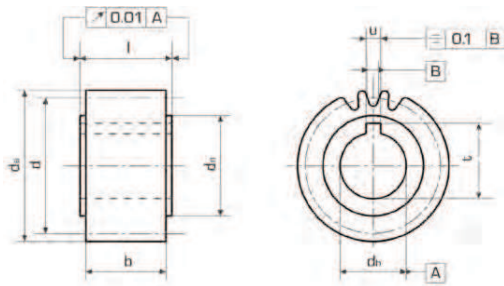
mit Nabe | with hub



Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	69,7	63,66	22	36	28	56	6	24,8	125-230-220
20	69,7	63,66	25	44	28	60	8	28,3	125-230-520
20	69,7	63,66	30	50	28	60	8	33,3	125-330-020
20	69,7	63,66	32	55	28	65	10	35,3	125-330-220
22	76,0	70,03	32	55	28	65	10	35,3	125-330-222
22	76,0	70,03	40	62	28	65	12	43,3	125-430-022
25	85,6	79,58	22	36	28	56	6	24,8	125-230-225
25	85,6	79,58	25	44	28	60	8	28,3	125-230-525
25	85,6	79,58	30	50	28	60	8	33,3	125-330-025
25	85,6	79,58	32	55	28	65	10	35,3	125-330-225
25	85,6	79,58	35	55	28	65	10	38,3	125-330-525
25	85,6	79,58	40	62	28	65	12	43,3	125-430-025
28	95,1	89,13	32	55	28	65	10	35,3	125-330-228
28	95,1	89,13	40	62	28	65	12	43,3	125-430-028
32	107,85	101,86	32	55	28	65	10	35,3	125-330-232
32	107,85	101,86	40	62	28	65	12	43,3	125-430-032

## Stirnräder mit geschliffenen Zahnflanken, geradeverzahnt

### Spur Gears with Straight Ground Teeth



Modul | module **4,0**

Verzahnungsqualität | toothing quality **7 e25**

geradverzahnt | straight teeth

Eingriffswinkel | pressure angle **20°**

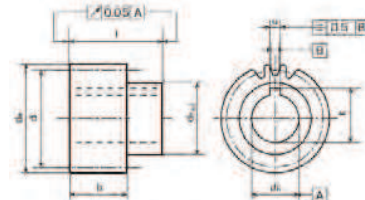
einsatzgehärtet | case hardened

Material | material **1.7131**

**[16MnCr5]**

Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	88,0	80,0	35	52	40	50	10	38,3	113-340-520
20	88,0	80,0	45	65	40	50	14	48,8	113-440-520
22	96,0	88,0	35	52	40	50	10	38,3	113-340-522
22	96,0	88,0	45	65	40	50	14	48,8	113-440-522
25	108,0	100,0	35	52	40	50	10	38,3	113-340-525
25	108,0	100,0	45	65	40	50	14	48,8	113-440-525
28	120,0	112,0	35	52	40	50	10	38,3	113-340-528
28	120,0	112,0	45	65	40	50	14	48,8	113-440-528
32	136,0	128,0	35	52	40	50	10	38,3	113-340-532
32	136,0	128,0	45	65	40	50	14	48,8	113-440-532
40	168,0	160,0	45	65	40	50	14	48,8	113-440-540
40	168,0	160,0	60	80	40	50	18	64,3	113-640-040

mit Nabe | with hub

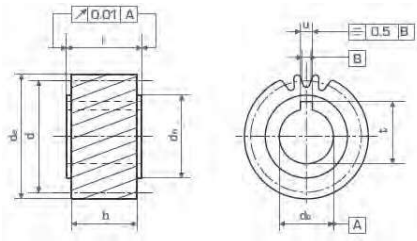


Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
20	88,0	80,0	32	55	40	75	10	35,3	115-340-220
20	88,0	80,0	35	55	40	75	10	38,3	115-340-520
20	88,0	80,0	40	62	40	75	12	43,3	115-440-020
22	96,0	88,0	45	68	40	75	14	48,8	115-440-522
25	108,0	100,0	32	55	40	75	10	35,3	115-340-225
25	108,0	100,0	35	55	40	75	10	38,3	115-340-525
25	108,0	100,0	40	62	40	75	12	43,3	115-440-025
25	108,0	100,0	55	80	40	80	16	59,3	115-540-525
28	120,0	112,0	45	68	40	75	14	48,8	115-440-528
32	136,0	128,0	55	80	40	80	16	59,3	115-540-532
32	136,0	128,0	75	110	40	100	20	80,4	115-740-532
40	168,0	160,0	75	110	40	100	20	80,4	115-740-540



## Stirnräder mit geschliffenen Zahnflanken, schrägverzahnt

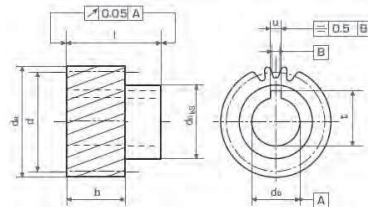
### Spur Gears with Ground Teeth, Helical



**Modul | module** **4,0**  
 Verzahnungsqualität | toothing quality **7 e25**  
 schrägverzahnt, linkssteigend | helical, left hand **19° 31' 42''**  
 Schrägungswinkel | helix angle **20°**  
 Eingriffswinkel | pressure angle  
 einsatzgehärtet | case hardened  
 Material | material **1.7131 [16MnCr5]**

Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
15	71,7	63,66	35	48	40	50	10	38,3	123-340-515
20	92,9	84,88	35	48	40	50	10	38,3	123-340-520
20	92,9	84,88	45	58	40	50	14	48,8	123-440-520
22	101,4	93,37	35	52	40	50	10	38,3	123-340-522
22	101,4	93,37	45	65	40	50	14	48,8	123-440-522
25	114,1	106,10	35	48	40	50	10	38,3	123-340-525
25	114,1	106,10	45	58	40	50	14	48,8	123-440-525

mit Nabe | **with hub**



Zähnez. No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Bestell Nr. Part No.
18	84,4	76,39	32	55	40	75	10	35,3	125-340-218
21	97,1	89,13	32	55	40	75	10	35,3	125-340-221
21	97,1	89,13	35	55	40	75	10	38,3	125-340-521
21	97,1	89,13	40	62	40	75	12	43,3	125-440-021
21	97,1	89,13	45	68	40	75	14	48,8	125-440-521
24	109,9	101,86	32	55	40	75	10	35,3	125-340-224
24	109,9	101,86	35	55	40	75	10	38,3	125-340-524
24	109,9	101,86	40	62	40	75	12	43,3	125-440-024
24	109,9	101,86	45	68	40	75	14	48,8	125-440-524
24	109,9	101,86	55	80	40	80	16	59,3	125-540-524
25	114,1	106,10	55	80	40	80	16	59,3	125-540-525