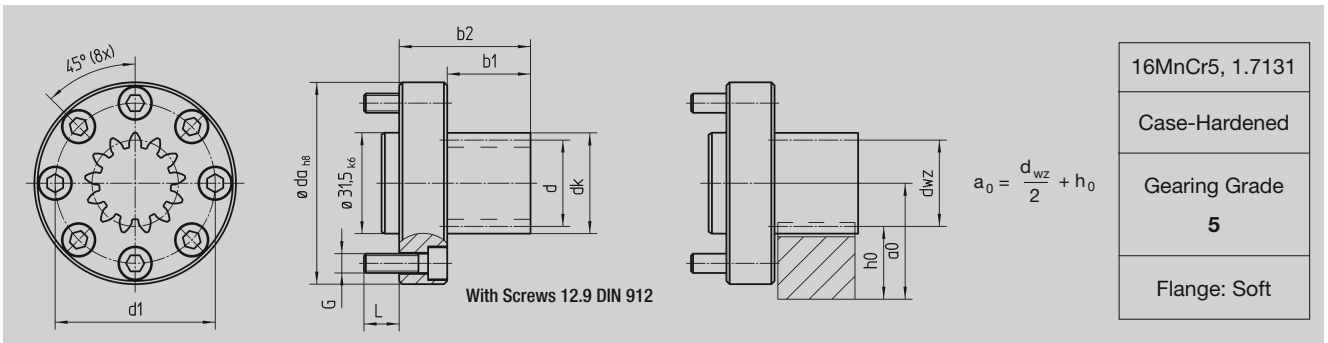




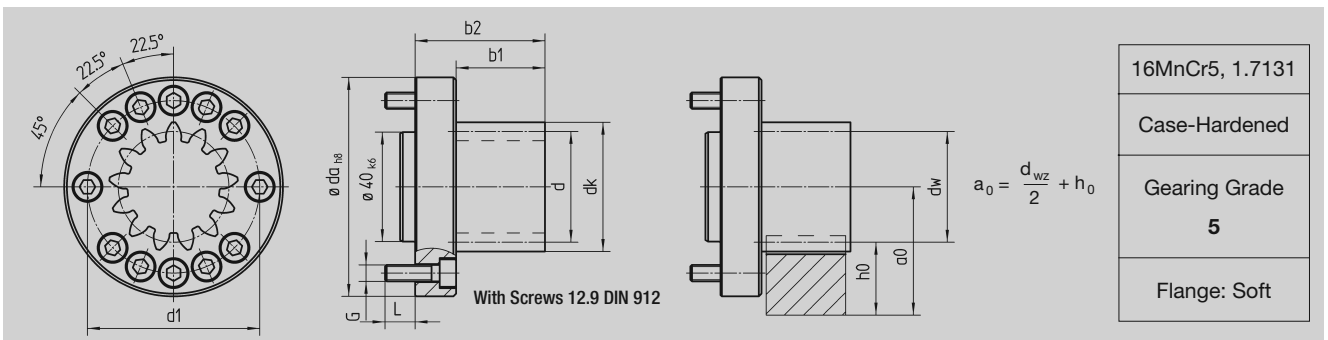
**Bolt Circle-ø 50, straight tooth system**



Order Code	No. of Teeth	Profile Modification Factor	Interface													
			z	x	d <sub>wz</sub>	d <sub>k</sub>	b <sub>1</sub>	b <sub>2</sub>	L	a <sub>0</sub>	ISO	d <sub>1</sub>	G	d <sub>ah8</sub>	L	kg
<b>Module 2</b>																
78 21 813	13	0.366	27.47	31.5	26	41	81.68	35.73	9409-1-A-50	50	M6	63	11	0.5		
78 21 817	17	-0.012	33.95	38.0	26	41	106.81	38.98	9409-1-A-50	50	M6	63	11	0.6		

Further number of teeth on request, min. number of teeth 13, max. number of teeth 17

**Bolt Circle-ø 63, straight tooth system**



Order Code	No. of Teeth	Profile Modification Factor	Interface													
			z	x	d <sub>wz</sub>	d <sub>k</sub>	b <sub>1</sub>	b <sub>2</sub>	L	a <sub>0</sub>	ISO	d <sub>1</sub>	G	d <sub>ah8</sub>	L	kg
<b>Module 2</b>																
78 22 813	13	0.366	27.47	31.5	26	41	81.68	35.73	9409-1-A-63	63	M6	80	11	0.8		
78 22 817	17	-0.012	33.95	38.0	26	41	106.81	38.98	9409-1-A-63	63	M6	80	11	0.8		
78 22 824	24	0.202	48.81	52.8	26	41	150.80	46.40	9409-1-A-63	63	M6	80	11	1.0		

Further number of teeth on request, min. number of teeth 13, max. number of teeth 24

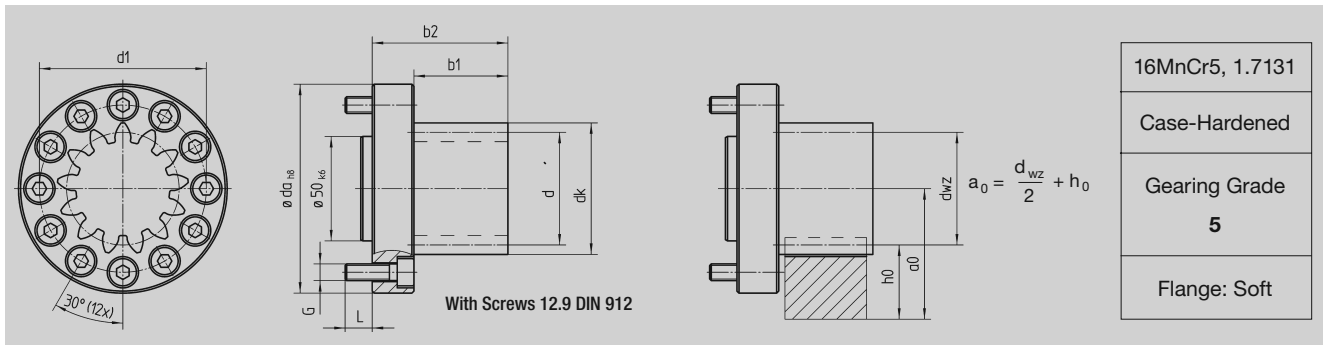
Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

<b>Module 3</b>																
Order Code	No. of Teeth	Profile Modification Factor	d <sub>wz</sub>	d <sub>k</sub>	b <sub>1</sub>	b <sub>2</sub>	L	a <sub>0</sub>	ISO	d <sub>1</sub>	G	d <sub>ah8</sub>	L	kg		
78 32 813	13	0.366	41.20	47.2	32.5	47.5	122.52	46.60	9409-1-A-63	63	M6	80	11	1.0		

Further number of teeth on request, min. number of teeth 13, max. number of teeth 15



**Bolt Circle-ø 80, straight tooth system**



Order Code	No. of Teeth z	Profile Modification Factor x	Interface							ISO	d <sub>1</sub>	G	d <sub>ah8</sub>	L	kg
			d <sub>wz</sub>	d <sub>k</sub>	b <sub>1</sub>	b <sub>2</sub>	L	a <sub>0</sub>							
<b>Module 2</b>															
<b>78 23 813</b>	13	0.366	27.47	31.5	26	46	81.68	35.73	9409-1-A-80	80	M8	100	13	1.4	
<b>78 23 824</b> <sup>(1)</sup>	24	0.202	48.81	52.8	26	46	150.80	46.40	9409-1-A-80	80	M8	100	13	1.6	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 31

<b>Module 3</b>															
<b>78 33 813</b>	13	0.366	41.20	47.2	32.5	52.5	122.52	46.60	9409-1-A-80	80	M8	100	13	1.6	
<b>78 33 820</b>	20	0.080	60.48	66.5	32.5	52.5	188.50	56.24	9409-1-A-80	80	M8	100	13	2.0	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 20

<b>Module 4</b>															
<b>78 43 813</b>	13	0.366	54.93	62.9	45	65	163.36	62.47	9409-1-A-80	80	M8	100	13	2.1	
<b>78 43 814</b>	14	0.397	59.17	67.2	45	65	175.93	64.59	9409-1-A-80	80	M8	100	13	2.2	

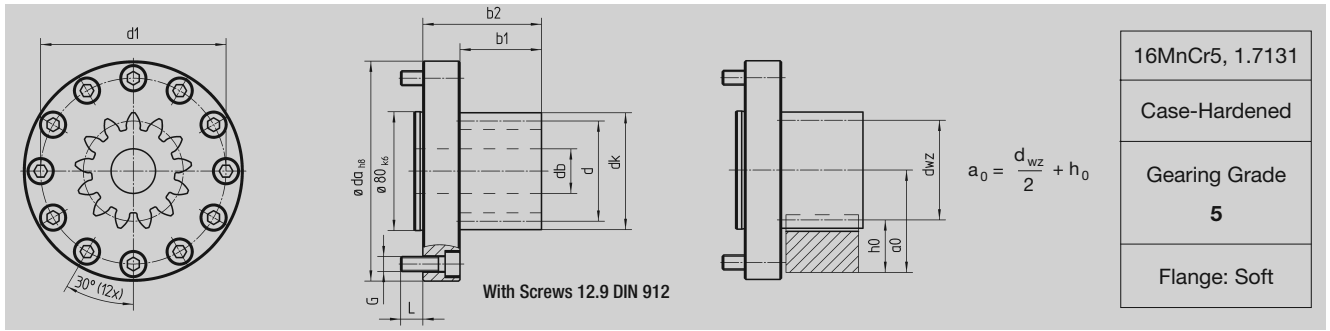
<sup>(1)</sup> Also available as pinion for counter bearing.

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.





### Bolt Circle- $\varnothing 125$ , straight tooth system



Order Code	No. of Teeth	Profile Modification Factor	Interface							ISO	d <sub>1</sub>	G	d <sub>ah8</sub>	L	d <sub>b</sub>	kg
			z	x	d <sub>wz</sub>	d <sub>k</sub>	b <sub>1</sub>	b <sub>2</sub>	L							
<b>Module 3</b>																
78 34 813	13	0.366	41.20	47.2	32.5	57.5	122.52	46.60	9409-1-A-125	125	M10	148	15	-	3.8	
78 34 413	13	0.366	41.20	47.2	32.5	57.5	122.52	46.60	-	125	M12	148	17	-	3.8	
78 34 820	20	0.080	60.48	66.5	32.5	57.5	188.50	56.24	9409-1-A-125	125	M10	148	15	-	4.2	
78 34 420	20	0.080	60.48	66.5	32.5	57.5	188.50	56.24	-	125	M12	148	17	-	4.2	
78 34 427	27	0.294	82.76	88.8	32.5	57.5	254.47	67.38	-	125	M12	148	17	-	4.9	
78 34 433	33	0.477	101.86	107.9	32.5	57.5	311.02	76.93	-	125	M12	148	17	-	5.6	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 34

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

### Module 4

78 44 813	13	0.366	54.93	62.9	45	70	163.36	62.47	9409-1-A-125	125	M10	148	15	-	4.4
78 44 413	13	0.366	54.93	62.9	45	70	163.36	62.47	-	125	M12	148	17	-	4.4
78 44 820	20	0.190	81.52	89.5	45	70	256.10	75.76	9409-1-A-125	125	M10	148	15	-	5.4
78 44 420	20	0.190	81.52	89.5	45	70	256.10	75.76	-	125	M12	148	17	-	5.4
78 44 821 <sup>(1)</sup>	21	0.110	84.88	92.9	45	70	263.89	77.44	9409-1-A-125	125	M10	148	15	-	5.5
78 44 421	21	0.110	84.88	92.9	45	70	263.89	77.44	-	125	M12	148	17	-	5.5
78 44 824	24	0.202	97.61	105.6	45	70	301.59	83.81	9409-1-A-125	125	M10	148	15	-	6.1
78 44 424	24	0.202	97.61	105.6	45	70	301.59	83.81	-	125	M12	148	17	-	6.1

Further number of teeth on request, min. number of teeth 13, max. number of teeth 24

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

### Module 5

78 54 813	13	0.366	68.66	78.7	55	80	204.20	68.33(2)	9409-1-A-125	125	M10	148	15	-	5.1
78 54 413	13	0.366	68.66	78.7	55	80	204.20	68.33(2)	-	125	M12	148	17	-	5.1
78 54 417	17	-0.012	84.88	94.9	55	80	267.04	79.44(2)	-	125	M12	148	17	-	6.0
78 54 819	19	0.049	95.49	105.5	55	80	298.45	81.75(2)	9409-1-A-125	125	M10	148	15	-	6.6
78 54 419	19	0.049	95.49	105.5	55	80	298.45	81.75(2)	-	125	M12	148	17	-	6.6

Further number of teeth on request, min. number of teeth 13, max. number of teeth 19

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

### Module 6

78 64 813	13	0.366	82.40	94.4	65	90	245.04	84.20	9409-1-A-125	125	M10	148	15	25	5.8
78 64 413	13	0.366	82.40	94.4	65	90	245.04	84.20	-	125	M12	148	17	25	5.9
78 64 814	14	0.397	88.76	100.8	65	90	263.89	87.38	9409-1-A-125	125	M10	148	15	25	6.3
78 64 816	16	-0.042	95.49	107.5	65	90	301.59	90.75	9409-1-A-125	125	M10	148	15	25	6.8

Further number of teeth on request, min. number of teeth 13, max. number of teeth 16

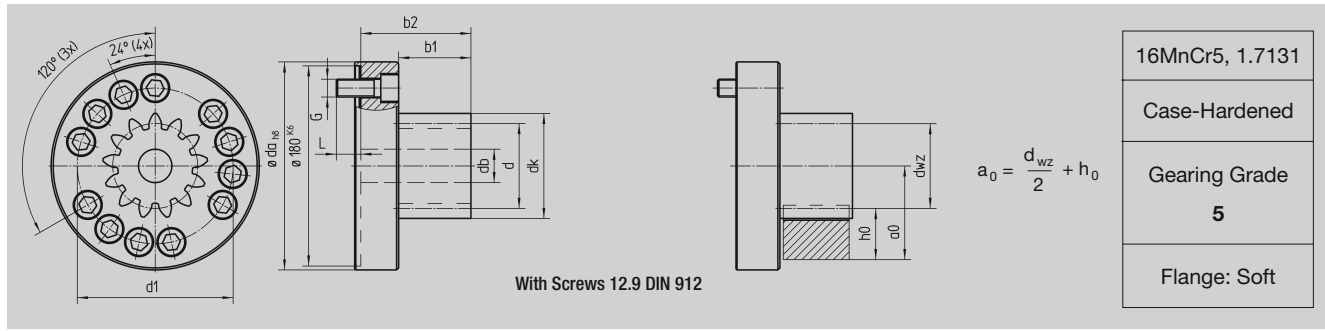
<sup>(1)</sup> Also available as pinion for counter bearing.

<sup>(2)</sup> For 29 55 ... a'<sub>0</sub> = a<sub>0</sub> + 10.

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.



### Bolt Circle- $\phi$ 140, straight tooth system



Order Code	No. of Teeth	Profile Modification Factor	Interface							ISO	$d_1$	G	$d_{ah8}$	L	$d_b$	kg
			$d_{wz}$	$d_k$	$b_1$	$b_2$	L	$a_0$								
<b>Module 4</b>																
<b>78 46 813</b>	13	0.366	54.93	62.9	45	79	163.36	62.47	-	140	M16	187	22	-	8.1	
<b>78 46 820</b>	20	0.190	81.52	89.5	45	79	256.10	75.76	-	140	M16	187	22	-	9.1	
<b>78 46 821</b>	21	0.110	84.88	92.9	45	79	263.89	77.44	-	140	M16	187	22	-	9.2	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 26

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

<b>Module 5</b>																
<b>78 56 815</b>	15	0.227	77.27	87.3	55	89	235.62	72.64(2)	-	140	M16	187	22	-	9.2	
<b>78 56 820</b>	20	0.080	100.80	110.8	55	89	314.16	84.40(2)	-	140	M16	187	22	-	10.6	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 21

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

<b>Module 6</b>																
<b>78 66 813</b>	13	0.366	82.40	94.4	65	99	245.04	84.20	-	140	M16	187	22	25	9.5	
<b>78 66 817</b> <sup>(1)</sup>	17	-0.012	101.86	113.9	65	99	320.44	93.93	-	140	M16	187	22	25	10.9	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 17

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

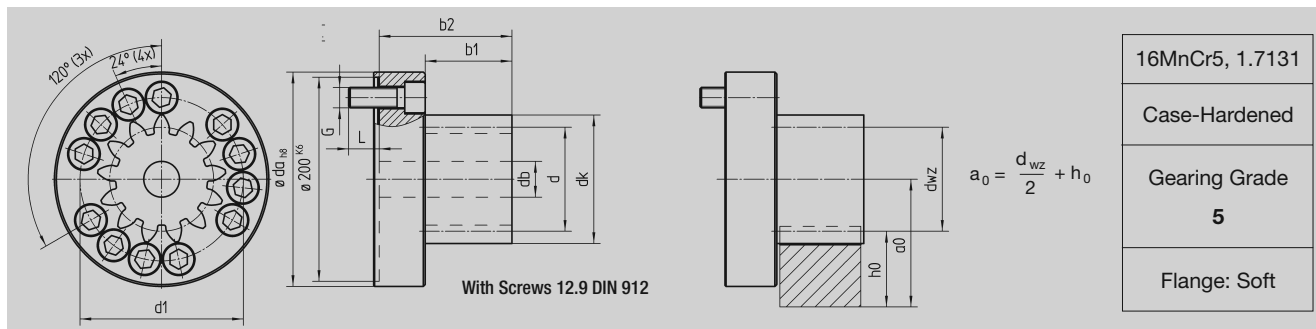
<sup>(1)</sup> Also available as pinion for counter bearing.

<sup>(2)</sup> For 29 55 ...  $a_0 = a_0 + 10$ .





### Bolt Circle-ø 160, straight tooth system



Order Code	No. of Teeth	Profile Modification Factor	Interface							ISO	d <sub>1</sub>	G	d <sub>ah8</sub>	L	d <sub>b</sub>	kg
			d <sub>wz</sub>	d <sub>k</sub>	b <sub>1</sub>	b <sub>2</sub>	L	a <sub>0</sub>								
<b>Module 5</b>																
<b>78 57 813</b>	13	0.366	68.66	78.7	55	100	204.20	68.33(2)	-	160	M20	210	30	-	13.8	
<b>78 57 820</b>	20	0.080	100.80	110.8	55	100	314.16	84.40(2)	-	160	M20	210	30	-	15.6	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 23

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

<b>Module 6</b>																
<b>78 67 813</b>	13	0.366	82.39	94.4	65	110	245.04	84.20	-	160	M20	210	30	25	14.5	
<b>78 67 817</b>	17	-0.012	101.86	113.9	65	110	320.44	93.93	-	160	M20	210	30	25	15.9	
<b>78 67 819</b>	19	0.049	114.59	126.6	65	110	358.14	100.30	-	160	M20	210	30	25	17.0	

Further number of teeth on request, min. number of teeth 13, max. number of teeth 19

Highlighted items will become obsolete in the future. Please check with the factory for delivery information.

<b>Module 8</b>																
<b>78 87 813</b>	13	0.366	109.86	125.9	85	130	326.73	125.93	-	160	M20	210	30	30	17.8	

(2) For 29 55 ... a'<sub>0</sub> = a<sub>0</sub> + 10.

