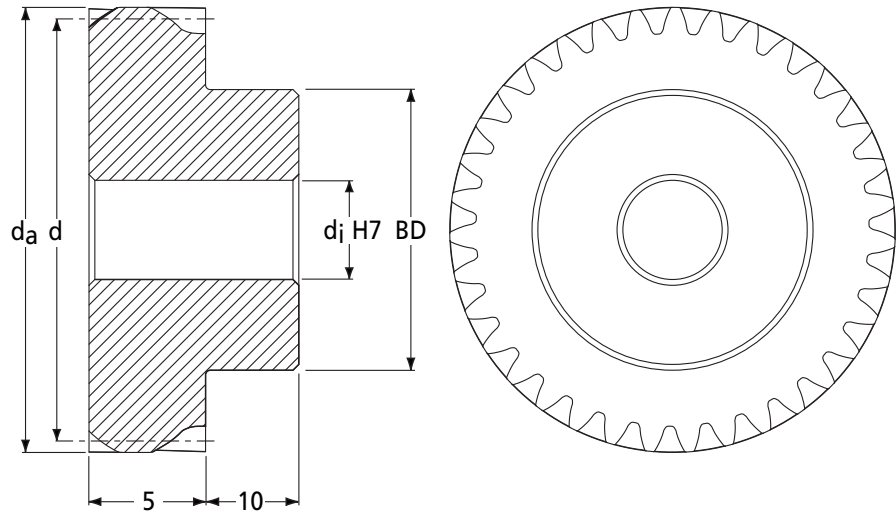


PHG
0.5m_n

PRECISION GEARS

0.5 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e DIN 3961/58405 (AGMA Q10)



DIN 58405 Tooth Thickness tol.

Part Number	No. of Teeth z	Ref. Dia. d	Tip Dia. d _a	Bore H7 d _j	Max. Bore H7 d _j	Hub Dia. BD	Backlash (mm)		I Inertia kgm ²	Mass kg
							j _{t,e} (max)	j _{t,i} (min)		
PHG0.5-20R	20	10.35	11.35	4	4	8	0.079 - 0.037	8.25 x 10 ⁻⁸	0.006	
PHG0.5-21R	21	10.87	11.87	4	4	8	0.079 - 0.037	9.20 x 10 ⁻⁸	0.007	
PHG0.5-22R	22	11.39	12.39	4	4	8	0.079 - 0.037	1.03 x 10 ⁻⁷	0.007	
PHG0.5-23R	23	11.91	12.91	4	4	8	0.079 - 0.037	1.16 x 10 ⁻⁷	0.007	
PHG0.5-24R	24	12.42	13.42	5	5	10	0.091 - 0.044	1.62 x 10 ⁻⁷	0.009	
PHG0.5-25R	25	12.94	13.94	5	5	10	0.091 - 0.044	1.79 x 10 ⁻⁷	0.009	
PHG0.5-26R	26	13.46	14.46	5	5	10	0.091 - 0.044	1.97 x 10 ⁻⁷	0.009	
PHG0.5-27R	27	13.98	14.98	5	5	10	0.091 - 0.044	2.17 x 10 ⁻⁷	0.010	
PHG0.5-28R	28	14.49	15.49	5	5	10	0.091 - 0.044	2.40 x 10 ⁻⁷	0.010	
PHG0.5-29R	29	15.01	16.01	6	6	13	0.091 - 0.044	4.37 x 10 ⁻⁷	0.015	
PHG0.5-30R	30	15.53	16.53	6	6	13	0.091 - 0.044	4.65 x 10 ⁻⁷	0.015	
PHG0.5-32R	32	16.56	17.56	6	6	13	0.091 - 0.044	5.30 x 10 ⁻⁷	0.016	
PHG0.5-35R	35	18.12	19.12	6	6	13	0.092 - 0.043	6.54 x 10 ⁻⁷	0.018	
PHG0.5-38R	38	19.67	20.67	6	10	18	0.092 - 0.043	1.37 x 10 ⁻⁶	0.028	
PHG0.5-40R	40	20.71	21.71	6	10	18	0.092 - 0.043	1.50 x 10 ⁻⁶	0.030	
PHG0.5-42R	42	21.74	22.74	6	10	18	0.092 - 0.043	1.65 x 10 ⁻⁶	0.031	
PHG0.5-45R	45	23.29	24.29	6	10	18	0.092 - 0.043	1.92 x 10 ⁻⁶	0.033	
PHG0.5-48R	48	24.85	25.85	6	10	18	0.092 - 0.043	2.25 x 10 ⁻⁶	0.036	
PHG0.5-50R	50	25.88	26.88	6	10	18	0.100 - 0.047	2.51 x 10 ⁻⁶	0.037	
PHG0.5-52R	52	26.92	27.92	6	12	25	0.100 - 0.047	5.00 x 10 ⁻⁶	0.057	
PHG0.5-55R	55	28.47	29.47	6	12	25	0.100 - 0.047	5.51 x 10 ⁻⁶	0.060	
PHG0.5-58R	58	30.02	31.02	6	12	25	0.102 - 0.046	6.10 x 10 ⁻⁶	0.063	
PHG0.5-60R	60	31.06	32.06	6	12	25	0.102 - 0.046	6.55 x 10 ⁻⁶	0.065	
PHG0.5-62R	62	32.09	33.09	6	12	25	0.102 - 0.046	7.05 x 10 ⁻⁶	0.067	
PHG0.5-65R	65	33.65	34.65	6	12	25	0.102 - 0.046	7.89 x 10 ⁻⁶	0.070	
PHG0.5-68R	68	35.20	36.20	6	12	25	0.102 - 0.046	8.86 x 10 ⁻⁶	0.073	
PHG0.5-70R	70	36.23	37.23	6	12	25	0.102 - 0.046	9.59 x 10 ⁻⁶	0.075	
PHG0.5-72R	72	37.27	38.27	6	12	25	0.102 - 0.046	1.04 x 10 ⁻⁵	0.078	
PHG0.5-75R	75	38.82	39.82	6	12	25	0.102 - 0.046	1.17 x 10 ⁻⁵	0.081	
PHG0.5-78R	78	40.38	41.38	8	16	35	0.102 - 0.046	2.17 x 10 ⁻⁵	0.119	
PHG0.5-80R	80	41.41	42.41	8	16	35	0.102 - 0.046	2.28 x 10 ⁻⁵	0.122	
PHG0.5-82R	82	42.45	43.45	8	16	35	0.102 - 0.046	2.39 x 10 ⁻⁵	0.125	
PHG0.5-85R	85	44.00	45.00	8	16	35	0.102 - 0.046	2.59 x 10 ⁻⁵	0.129	
PHG0.5-90R	90	46.59	47.59	8	16	35	0.102 - 0.046	2.95 x 10 ⁻⁵	0.136	
PHG0.5-100R	100	51.76	52.76	8	16	35	0.115 - 0.097	3.90 x 10 ⁻⁵	0.151	
PHG0.5-120R	120	62.12	63.12	8	16	35	0.115 - 0.097	6.85 x 10 ⁻⁵	0.188	
PHG0.5-130R	130	67.29	68.29	12	25	45	0.115 - 0.097	1.10 x 10 ⁻⁴	0.251	
PHG0.5-140R	140	72.47	73.47	12	25	45	0.115 - 0.097	1.37 x 10 ⁻⁴	0.273	
PHG0.5-150R	150	77.65	78.65	12	25	45	0.115 - 0.097	1.71 x 10 ⁻⁴	0.297	
PHG0.5-200R	200	103.53	104.53	14	30	55	0.139 - 0.066	5.11 x 10 ⁻⁴	0.498	
PHG0.5-230R	230	119.06	120.06	16	40	65	0.139 - 0.066	9.08 x 10 ⁻⁴	0.673	

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PRECISION GEARS

0.5 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e DIN 3961/58405 (AGMA Q10)

PHG
0.5m_n

Standard Part **PHG** **0.5** - **50** **R**
Modified Part **PHG** **0.5** - **50** **L** **H** **8** **K** **T**

PHG - Precision Helical Gear
Quality Grade 7e DIN 3961/58405
Other Quality Grades available.
See page 293

m_n Module - Cut with DIN 867 1.25/0.20/1.0
Ref. Tooth Profile Topping WD = 2.25 x m_n

Number of Teeth z

Right Hand Helix (R) runs with
Left Hand Helix (L)

Standard Material = 817M40T (28HRC)
H = 805M20 Case Hardened (58HRC)

T = 1 x Tapped hole 2T = 2 x Tapped holes.
P = 1 x Pin Hole PT = 1 x Pin Hole thru.
All threads metric as standard,
refer to page 308 for sizes and prices.

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
For prices see page 308

To specify different bore enter size required
Example: 8 = 8mm H7 etc
For prices see page 308

Quality Grades and Tolerances stated prior to heat treatment processes.

η Efficiency approx. 98%

Discounts: 6+ -5% 19+ -10%

Part Number	817M40T (28HRC)		Case Hardened 805M20 (58HRC)#		
	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5	Part Number	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5
PHG0.5-20R	0.34	£12.03	PHG0.5-20RH	1.25	£19.86
PHG0.5-21R	0.36	£12.15	PHG0.5-21RH	1.31	£20.07
PHG0.5-22R	0.37	£12.36	PHG0.5-22RH	1.37	£20.41
PHG0.5-23R	0.39	£12.48	PHG0.5-23RH	1.43	£20.60
PHG0.5-24R	0.41	£12.65	PHG0.5-24RH	1.50	£20.86
PHG0.5-25R	0.43	£12.76	PHG0.5-25RH	1.56	£21.07
PHG0.5-26R	0.56	£12.96	PHG0.5-26RH	1.79	£21.40
PHG0.5-27R	0.58	£13.08	PHG0.5-27RH	1.86	£21.59
PHG0.5-28R	0.60	£13.26	PHG0.5-28RH	1.92	£21.90
PHG0.5-29R	0.62	£13.31	PHG0.5-29RH	1.99	£21.97
PHG0.5-30R	0.73	£13.35	PHG0.5-30RH	2.05	£22.03
PHG0.5-32R	0.78	£13.65	PHG0.5-32RH	2.19	£22.52
PHG0.5-35R	0.85	£14.12	PHG0.5-35RH	2.39	£23.29
PHG0.5-38R	0.93	£14.60	PHG0.5-38RH	2.60	£24.11
PHG0.5-40R	1.25	£14.87	PHG0.5-40RH	3.04	£24.54
PHG0.5-42R	1.31	£15.15	PHG0.5-42RH	3.19	£25.01
PHG0.5-45R	1.40	£15.62	PHG0.5-45RH	3.42	£25.78
PHG0.5-48R	1.50	£16.09	PHG0.5-48RH	3.65	£26.56
PHG0.5-50R	1.95	£16.39	PHG0.5-50RH	4.12	£27.03
PHG0.5-52R	2.03	£16.63	PHG0.5-52RH	4.29	£27.43
PHG0.5-55R	2.15	£16.97	PHG0.5-55RH	4.53	£28.03
PHG0.5-58R	2.27	£17.31	PHG0.5-58RH	4.78	£28.58
PHG0.5-60R	2.67	£17.56	PHG0.5-60RH	5.15	£28.99
PHG0.5-62R	2.76	£17.75	PHG0.5-62RH	5.32	£29.29
PHG0.5-65R	2.89	£18.11	PHG0.5-65RH	5.58	£29.89
PHG0.5-68R	3.03	£18.32	PHG0.5-68RH	5.84	£30.25
PHG0.5-70R	3.11	£18.41	PHG0.5-70RH	6.01	£30.38
PHG0.5-72R	3.20	£18.62	PHG0.5-72RH	6.18	£30.72
PHG0.5-75R	3.34	£18.76	PHG0.5-75RH	6.44	£30.95
PHG0.5-78R	3.47	£19.08	PHG0.5-78RH	6.69	£31.50
PHG0.5-80R	4.60	£19.18	PHG0.5-80RH	7.20	£31.64
PHG0.5-82R	4.71	£19.35	PHG0.5-82RH	7.38	£31.93
PHG0.5-85R	4.89	£19.55	PHG0.5-85RH	7.65	£32.25
PHG0.5-90R	5.17	£19.91	PHG0.5-90RH	8.10	£32.86
PHG0.5-100R	5.89	£20.22	PHG0.5-100RH	9.21	£33.35
PHG0.5-120R	7.07	£24.46	PHG0.5-120RH	11.05	£40.37
PHG0.5-130R	7.66	£27.84	PHG0.5-130RH	11.97	£45.94
PHG0.5-140R	8.25	£29.25	PHG0.5-140RH	12.89	£48.27
PHG0.5-150R	9.03	£32.31	PHG0.5-150RH	14.11	£53.31
PHG0.5-200R	12.17	£39.33	PHG0.5-200RH	19.01	£64.89
PHG0.5-230R	13.99	£44.00	PHG0.5-230RH	21.86	£72.61

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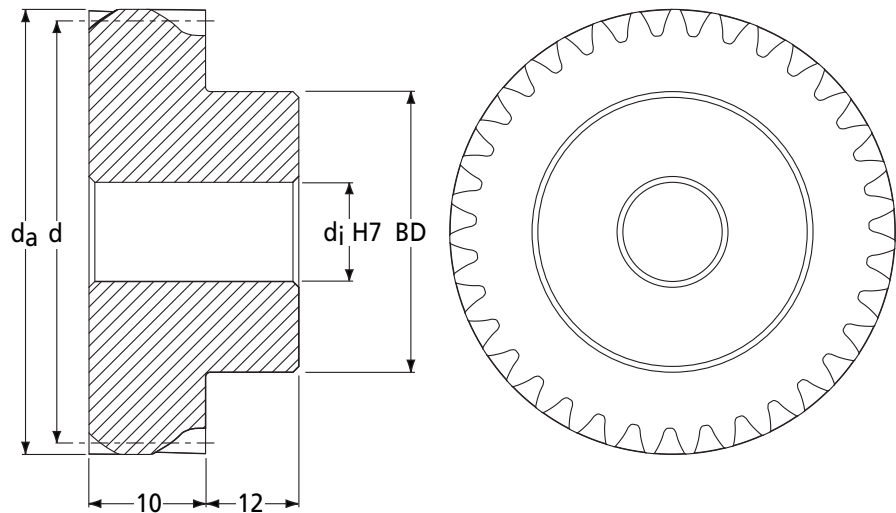
Product information updated 1st April 2011 and subject to change. Please contact Sales for the latest prices and availability.

PHG
1.0m_n

PRECISION GEARS

1.0 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)



DIN 3967 Tooth Thickness tol.

Part Number	No. of Teeth z	Ref. Dia. d	Tip Dia. d _a	Bore H7 d _j	Max. Bore H7 d _j	Hub Dia. BD	Backlash (mm)		I Inertia kgm ²	Mass kg
							j _{t,e} (max)	j _{t,i} (min)		
PHG1.0-18R	18	18.63	20.63	5	5	13	0.132 - 0.054	1.21 x 10 ⁻⁶	0.030	
PHG1.0-19R	19	19.67	21.67	5	5	13	0.132 - 0.054	1.44 x 10 ⁻⁶	0.033	
PHG1.0-20R	20	20.71	22.71	5	5	13	0.132 - 0.054	1.70 x 10 ⁻⁶	0.035	
PHG1.0-21R	21	21.74	23.74	5	5	13	0.132 - 0.054	2.01 x 10 ⁻⁶	0.038	
PHG1.0-22R	22	22.78	24.78	5	5	13	0.132 - 0.054	2.36 x 10 ⁻⁶	0.041	
PHG1.0-23R	23	23.81	25.81	5	5	13	0.132 - 0.054	2.76 x 10 ⁻⁶	0.044	
PHG1.0-24R	24	24.85	26.85	6	10	20	0.132 - 0.054	4.42 x 10 ⁻⁶	0.062	
PHG1.0-25R	25	25.88	27.88	6	10	20	0.132 - 0.054	4.94 x 10 ⁻⁶	0.066	
PHG1.0-26R	26	26.92	28.92	6	10	20	0.132 - 0.054	5.52 x 10 ⁻⁶	0.069	
PHG1.0-27R	27	27.95	29.95	6	10	20	0.132 - 0.054	6.18 x 10 ⁻⁶	0.072	
PHG1.0-28R	28	28.99	30.99	6	10	20	0.132 - 0.054	6.91 x 10 ⁻⁶	0.076	
PHG1.0-29R	29	30.02	32.02	6	10	20	0.134 - 0.053	7.72 x 10 ⁻⁶	0.080	
PHG1.0-30R	30	31.06	33.06	6	10	20	0.134 - 0.053	8.62 x 10 ⁻⁶	0.084	
PHG1.0-32R	32	33.13	35.13	6	10	20	0.134 - 0.053	1.07 x 10 ⁻⁵	0.092	
PHG1.0-35R	35	36.23	38.23	6	10	20	0.134 - 0.053	1.47 x 10 ⁻⁵	0.105	
PHG1.0-38R	38	39.34	41.34	8	20	35	0.134 - 0.053	3.22 x 10 ⁻⁵	0.176	
PHG1.0-40R	40	41.41	43.41	8	20	35	0.134 - 0.053	3.63 x 10 ⁻⁵	0.187	
PHG1.0-42R	42	43.48	45.48	8	20	35	0.134 - 0.053	4.12 x 10 ⁻⁵	0.197	
PHG1.0-45R	45	46.59	48.59	8	20	35	0.134 - 0.053	4.98 x 10 ⁻⁵	0.215	
PHG1.0-48R	48	49.69	51.69	8	20	35	0.134 - 0.053	6.04 x 10 ⁻⁵	0.233	
PHG1.0-50R	50	51.76	53.76	10	22	40	0.177 - 0.072	7.84 x 10 ⁻⁵	0.269	
PHG1.0-52R	52	53.83	55.83	10	22	40	0.177 - 0.072	8.77 x 10 ⁻⁵	0.282	
PHG1.0-55R	55	56.94	58.94	10	22	40	0.177 - 0.072	1.04 x 10 ⁻⁴	0.303	
PHG1.0-58R	58	60.05	62.05	10	22	40	0.177 - 0.072	1.23 x 10 ⁻⁴	0.326	
PHG1.0-60R	60	62.12	64.12	10	22	40	0.177 - 0.072	1.37 x 10 ⁻⁴	0.341	
PHG1.0-62R	62	64.19	66.19	10	22	40	0.177 - 0.072	1.53 x 10 ⁻⁴	0.357	
PHG1.0-65R	65	67.29	69.29	10	30	50	0.177 - 0.072	2.14 x 10 ⁻⁴	0.449	
PHG1.0-68R	68	70.40	72.40	10	30	50	0.177 - 0.072	2.45 x 10 ⁻⁴	0.475	
PHG1.0-70R	70	72.47	74.47	10	30	50	0.177 - 0.072	2.68 x 10 ⁻⁴	0.493	
PHG1.0-72R	72	74.54	76.54	10	30	50	0.177 - 0.072	2.94 x 10 ⁻⁴	0.512	
PHG1.0-75R	75	77.65	79.65	10	30	50	0.177 - 0.072	3.36 x 10 ⁻⁴	0.541	
PHG1.0-78R	78	80.75	82.75	10	30	50	0.179 - 0.070	3.83 x 10 ⁻⁴	0.571	
PHG1.0-80R	80	82.82	84.82	10	30	50	0.179 - 0.070	4.17 x 10 ⁻⁴	0.592	
PHG1.0-82R	82	84.89	86.89	12	35	60	0.179 - 0.070	5.17 x 10 ⁻⁴	0.689	
PHG1.0-85R	85	88.00	90.00	12	35	60	0.179 - 0.070	5.78 x 10 ⁻⁴	0.722	
PHG1.0-90R	90	93.17	95.17	12	35	60	0.179 - 0.070	6.96 x 10 ⁻⁴	0.780	
PHG1.0-95R	95	98.35	100.35	12	35	60	0.179 - 0.070	8.36 x 10 ⁻⁴	0.840	
PHG1.0-100R	100	103.53	105.53	12	35	60	0.179 - 0.070	9.99 x 10 ⁻⁴	0.905	
PHG1.0-110R	110	113.88	115.88	14	40	70	0.179 - 0.070	1.51 x 10 ⁻³	1.132	
PHG1.0-120R	120	124.23	126.23	14	40	70	0.181 - 0.068	2.05 x 10 ⁻³	1.284	
PHG1.0-125R	125	129.41	131.41	14	40	70	0.235 - 0.101	2.37 x 10 ⁻³	1.365	

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PRECISION GEARS

1.0 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)

PHG
1.0m_n

Standard Part **PHG** **1.0** **-** **50** **R**
Modified Part **PHG** **1.0** **-** **50** **L** **H** **12** **K** **T**

PHG - Precision Helical Gear
Quality Grade 7e25 DIN 3961/3967
Other Quality Grades available.
See page 293

m_n Module - Cut with DIN 867 1.25/0.20/1.0
Ref. Tooth Profile Topping WD = 2.25 x m_n

Number of Teeth z

Right Hand Helix (R) runs with
Left Hand Helix (L)

Standard Material = 817M40T (28HRC)
H = 805M20 Case Hardened (58HRC)

T = 1 x Tapped hole 2T = 2 x Tapped holes.
P = 1 x Pin Hole PT = 1 x Pin Hole thru.
All threads metric as standard,
refer to page 308 for sizes and prices.

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
For prices see page 308

To specify different bore enter size required
Example: 12 = 12mm H7 etc
For prices see page 308

Quality Grades and Tolerances stated prior to heat treatment processes.

η Efficiency approx. 98%

Discounts: 6+ -5% 19+ -10%

Part Number	817M40T (28HRC)		Case Hardened 805M20 (58HRC)#		
	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5	Part Number	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5
PHG1.0-18R	1.68	£12.15	PHG1.0-18RH	6.14	£20.07
PHG1.0-19R	1.77	£12.41	PHG1.0-19RH	6.48	£20.48
PHG1.0-20R	2.37	£12.76	PHG1.0-20RH	8.69	£21.07
PHG1.0-21R	2.49	£12.87	PHG1.0-21RH	9.12	£21.24
PHG1.0-22R	2.61	£13.03	PHG1.0-22RH	9.56	£21.49
PHG1.0-23R	2.72	£13.08	PHG1.0-23RH	9.99	£21.59
PHG1.0-24R	2.84	£13.15	PHG1.0-24RH	10.43	£21.72
PHG1.0-25R	2.96	£13.69	PHG1.0-25RH	10.86	£22.59
PHG1.0-26R	3.88	£14.26	PHG1.0-26RH	14.21	£23.54
PHG1.0-27R	4.02	£14.50	PHG1.0-27RH	14.76	£23.92
PHG1.0-28R	4.17	£14.82	PHG1.0-28RH	15.30	£24.46
PHG1.0-29R	4.32	£15.19	PHG1.0-29RH	15.85	£25.07
PHG1.0-30R	5.10	£15.48	PHG1.0-30RH	16.39	£25.55
PHG1.0-32R	5.44	£15.85	PHG1.0-32RH	17.48	£26.16
PHG1.0-35R	5.95	£16.39	PHG1.0-35RH	19.12	£27.03
PHG1.0-38R	6.46	£17.10	PHG1.0-38RH	20.76	£28.22
PHG1.0-40R	8.70	£17.72	PHG1.0-40RH	24.31	£29.24
PHG1.0-42R	9.13	£17.82	PHG1.0-42RH	25.52	£29.41
PHG1.0-45R	9.78	£18.06	PHG1.0-45RH	27.35	£29.80
PHG1.0-48R	10.44	£18.27	PHG1.0-48RH	29.17	£30.14
PHG1.0-50R	13.60	£20.11	PHG1.0-50RH	32.97	£33.19
PHG1.0-52R	14.15	£20.72	PHG1.0-52RH	34.29	£34.20
PHG1.0-55R	14.96	£21.58	PHG1.0-55RH	36.27	£35.62
PHG1.0-58R	15.78	£22.26	PHG1.0-58RH	38.25	£36.70
PHG1.0-60R	18.59	£22.83	PHG1.0-60RH	41.20	£37.68
PHG1.0-62R	19.21	£23.49	PHG1.0-62RH	42.57	£38.78
PHG1.0-65R	20.14	£25.23	PHG1.0-65RH	44.63	£41.63
PHG1.0-68R	21.07	£26.44	PHG1.0-68RH	46.69	£43.64
PHG1.0-70R	21.69	£26.98	PHG1.0-70RH	48.07	£44.53
PHG1.0-72R	22.31	£27.56	PHG1.0-72RH	49.44	£45.48
PHG1.0-75R	23.24	£28.95	PHG1.0-75RH	51.50	£47.78
PHG1.0-78R	24.17	£29.96	PHG1.0-78RH	53.56	£49.44
PHG1.0-80R	32.03	£30.52	PHG1.0-80RH	57.60	£50.36
PHG1.0-82R	32.83	£31.51	PHG1.0-82RH	59.04	£52.00
PHG1.0-85R	34.03	£32.42	PHG1.0-85RH	61.20	£53.50
PHG1.0-90R	36.03	£33.33	PHG1.0-90RH	64.80	£55.02
PHG1.0-95R	38.03	£36.13	PHG1.0-95RH	68.40	£59.61
PHG1.0-100R	47.15	£36.59	PHG1.0-100RH	73.67	£60.37
PHG1.0-110R	51.86	£42.09	PHG1.0-110RH	81.03	£69.45
PHG1.0-120R	56.57	£51.83	PHG1.0-120RH	88.40	£85.54
PHG1.0-125R	58.93	£55.71	PHG1.0-125RH	92.08	£91.92

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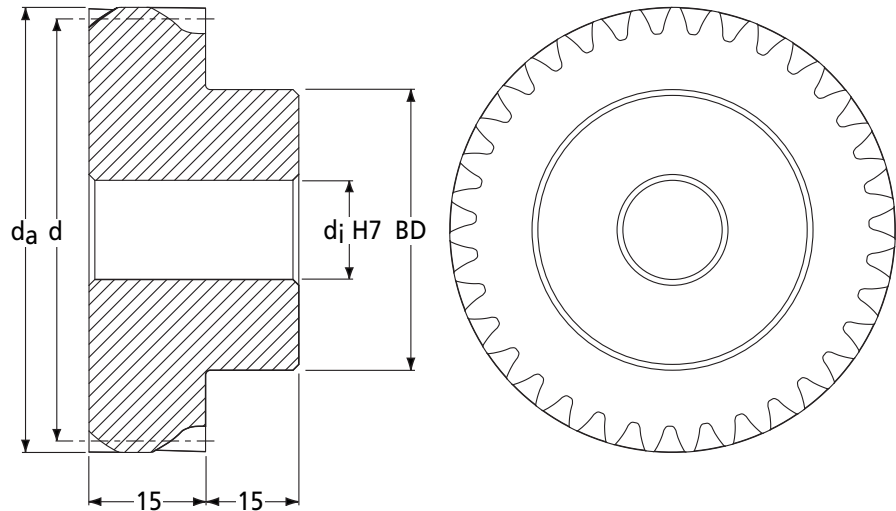
Product information updated 1st April 2011 and subject to change. Please contact Sales for the latest prices and availability.

PHG
1.5m_n

PRECISION GEARS

1.5 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)



DIN 3967 Tooth Thickness tol.

Part Number	No. of Teeth z	Ref. Dia. d	Tip Dia. d _a	Bore H7 d _j	Max. Bore H7 d _j	Hub Dia. BD	Backlash (mm)		I Inertia kgm ²	Mass kg
							j _{t,e} (max)	j _{t,i} (min)		
PHG1.5-15R	15	23.29	26.29	6	10	19	0.132	-0.054	5.08 x 10 ⁻⁶	0.076
PHG1.5-16R	16	24.85	27.85	6	10	19	0.132	-0.054	6.10 x 10 ⁻⁶	0.083
PHG1.5-17R	17	26.40	29.40	6	10	19	0.132	-0.054	7.32 x 10 ⁻⁶	0.090
PHG1.5-18R	18	27.95	30.95	6	10	19	0.132	-0.054	8.77 x 10 ⁻⁶	0.098
PHG1.5-19R	19	29.51	32.51	6	10	19	0.132	-0.054	1.05 x 10 ⁻⁵	0.106
PHG1.5-20R	20	31.06	34.06	6	10	19	0.134	-0.053	1.25 x 10 ⁻⁵	0.115
PHG1.5-21R	21	32.61	35.61	6	10	19	0.134	-0.053	1.48 x 10 ⁻⁵	0.124
PHG1.5-22R	22	34.16	37.16	8	16	28	0.134	-0.053	2.30 x 10 ⁻⁵	0.167
PHG1.5-23R	23	35.72	38.72	8	16	28	0.134	-0.053	2.60 x 10 ⁻⁵	0.177
PHG1.5-24R	24	37.27	40.27	8	16	28	0.134	-0.053	2.95 x 10 ⁻⁵	0.188
PHG1.5-25R	25	38.82	41.82	8	16	28	0.134	-0.053	3.34 x 10 ⁻⁵	0.198
PHG1.5-26R	26	40.38	43.38	8	16	28	0.134	-0.053	3.79 x 10 ⁻⁵	0.210
PHG1.5-27R	27	41.93	44.93	8	16	28	0.134	-0.053	4.28 x 10 ⁻⁵	0.221
PHG1.5-28R	28	43.48	46.48	8	16	28	0.134	-0.053	4.84 x 10 ⁻⁵	0.234
PHG1.5-29R	29	45.03	48.03	10	22	40	0.134	-0.053	7.69 x 10 ⁻⁵	0.315
PHG1.5-30R	30	46.59	49.59	10	22	40	0.134	-0.053	8.38 x 10 ⁻⁵	0.328
PHG1.5-32R	32	49.69	52.69	10	22	40	0.134	-0.053	9.97 x 10 ⁻⁵	0.355
PHG1.5-35R	35	54.35	57.35	10	22	40	0.177	-0.072	1.30 x 10 ⁻⁴	0.400
PHG1.5-38R	38	59.01	62.01	12	30	50	0.177	-0.072	2.11 x 10 ⁻⁴	0.524
PHG1.5-40R	40	62.12	65.12	12	30	50	0.177	-0.072	2.43 x 10 ⁻⁴	0.558
PHG1.5-42R	42	65.22	68.22	12	30	50	0.177	-0.072	2.80 x 10 ⁻⁴	0.595
PHG1.5-45R	45	69.88	72.88	12	30	50	0.177	-0.072	3.45 x 10 ⁻⁴	0.652
PHG1.5-48R	48	74.54	77.54	12	30	50	0.177	-0.072	4.26 x 10 ⁻⁴	0.714
PHG1.5-50R	50	77.65	80.65	14	35	65	0.177	-0.072	6.22 x 10 ⁻⁴	0.908
PHG1.5-52R	52	80.75	83.75	14	35	65	0.179	-0.070	6.93 x 10 ⁻⁴	0.953
PHG1.5-55R	55	85.41	88.41	14	35	65	0.179	-0.070	8.16 x 10 ⁻⁴	1.024
PHG1.5-58R	58	90.07	93.07	14	35	65	0.179	-0.070	9.60 x 10 ⁻⁴	1.100
PHG1.5-60R	60	93.17	96.17	14	35	65	0.179	-0.070	1.07 x 10 ⁻³	1.152
PHG1.5-62R	62	96.28	99.28	14	35	65	0.179	-0.070	1.19 x 10 ⁻³	1.206
PHG1.5-65R	65	100.94	103.94	16	40	85	0.179	-0.070	1.79 x 10 ⁻³	1.557
PHG1.5-68R	68	105.60	108.60	16	40	85	0.179	-0.070	2.03 x 10 ⁻³	1.646
PHG1.5-70R	70	108.70	111.70	16	40	85	0.179	-0.070	2.20 x 10 ⁻³	1.707
PHG1.5-72R	72	111.81	114.81	16	40	85	0.179	-0.070	2.39 x 10 ⁻³	1.770
PHG1.5-75R	75	116.47	119.47	16	40	85	0.179	-0.070	2.71 x 10 ⁻³	1.868
PHG1.5-78R	78	121.13	124.13	16	40	85	0.186	-0.070	3.07 x 10 ⁻³	1.970

PRECISION GEARS

1.5 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)

PHG
1.5m_n

Standard Part PHG 1.5-50 R

Modified Part PHG 1.5-50 L H 25 K T

PHG - Precision Helical Gear
Quality Grade 7e25 DIN 3961/3967
Other Quality Grades available.
See page 293

m_n Module - Cut with DIN 867 1.25/0.20/1.0
Ref. Tooth Profile Topping WD = 2.25 x m_n

Number of Teeth z

Right Hand Helix (R) runs with
Left Hand Helix (L)

Standard Material = 817M40T (28HRC)
H = 805M20 Case Hardened (58HRC)

T = 1 x Tapped hole 2T = 2 x Tapped holes.
P = 1 x Pin Hole PT = 1 x Pin Hole thru.
All threads metric as standard,
refer to page 308 for sizes and prices.

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
For prices see page 308

To specify different bore enter size required
Example: 25 = 25mm H7 etc
For prices see page 308

Quality Grades and Tolerances stated prior to heat treatment processes.

η Efficiency approx. 98%

Discounts: 6+ -5% 19+ -10%

Part Number	817M40T (28HRC)		Case Hardened 805M20 (58HRC)#		
	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5	Part Number	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5
PHG1.5-15R	4.35	£14.68	PHG1.5-15RH	15.93	£24.23
PHG1.5-16R	4.63	£15.03	PHG1.5-16RH	16.99	£24.80
PHG1.5-17R	4.92	£15.48	PHG1.5-17RH	18.06	£25.55
PHG1.5-18R	5.21	£15.96	PHG1.5-18RH	19.12	£26.32
PHG1.5-19R	5.50	£16.56	PHG1.5-19RH	20.18	£27.34
PHG1.5-20R	7.37	£17.36	PHG1.5-20RH	27.04	£28.65
PHG1.5-21R	7.74	£17.60	PHG1.5-21RH	28.39	£29.07
PHG1.5-22R	8.11	£17.75	PHG1.5-22RH	29.74	£29.29
PHG1.5-23R	8.48	£18.03	PHG1.5-23RH	31.09	£29.76
PHG1.5-24R	8.85	£18.27	PHG1.5-24RH	32.44	£30.14
PHG1.5-25R	9.22	£19.18	PHG1.5-25RH	33.80	£31.64
PHG1.5-26R	12.06	£20.09	PHG1.5-26RH	44.23	£33.15
PHG1.5-27R	12.53	£20.81	PHG1.5-27RH	45.93	£34.33
PHG1.5-28R	12.99	£21.38	PHG1.5-28RH	47.63	£35.29
PHG1.5-29R	13.45	£21.67	PHG1.5-29RH	49.33	£35.77
PHG1.5-30R	15.86	£22.32	PHG1.5-30RH	55.32	£36.84
PHG1.5-32R	16.92	£23.11	PHG1.5-32RH	59.01	£38.13
PHG1.5-35R	18.51	£23.80	PHG1.5-35RH	64.54	£39.27
PHG1.5-38R	20.09	£26.08	PHG1.5-38RH	70.07	£43.03
PHG1.5-40R	27.06	£27.23	PHG1.5-40RH	82.04	£44.95
PHG1.5-42R	28.42	£27.26	PHG1.5-42RH	86.15	£44.98
PHG1.5-45R	30.45	£27.85	PHG1.5-45RH	92.30	£45.96
PHG1.5-48R	32.48	£29.73	PHG1.5-48RH	98.45	£49.06
PHG1.5-50R	42.34	£33.33	PHG1.5-50RH	111.29	£55.00
PHG1.5-52R	44.03	£34.90	PHG1.5-52RH	115.74	£57.59
PHG1.5-55R	46.57	£35.85	PHG1.5-55RH	122.42	£59.15
PHG1.5-58R	49.11	£36.59	PHG1.5-58RH	129.09	£60.37
PHG1.5-60R	57.86	£36.97	PHG1.5-60RH	139.05	£60.99
PHG1.5-62R	59.78	£37.67	PHG1.5-62RH	143.68	£62.16
PHG1.5-65R	62.68	£39.08	PHG1.5-65RH	150.64	£64.49
PHG1.5-68R	65.57	£41.48	PHG1.5-68RH	157.59	£68.46
PHG1.5-70R	67.50	£42.94	PHG1.5-70RH	162.22	£70.86
PHG1.5-72R	69.43	£45.39	PHG1.5-72RH	166.86	£74.89
PHG1.5-75R	72.32	£48.36	PHG1.5-75RH	173.81	£79.80
PHG1.5-78R	75.21	£50.97	PHG1.5-78RH	180.76	£84.11

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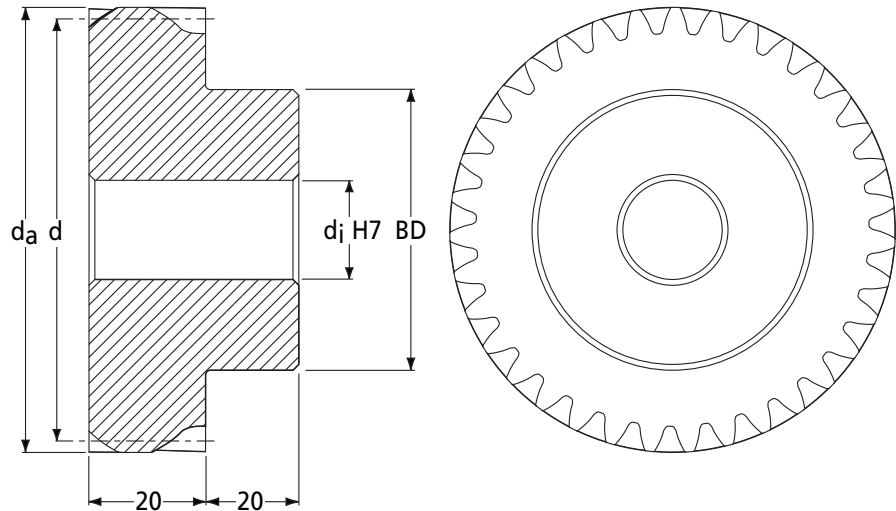
Product information updated 1st April 2011 and subject to change. Please contact Sales for the latest prices and availability.

PHG
2.0m_n

PRECISION GEARS

2.0 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)



DIN 3967 Tooth Thickness tol.

Part Number	No. of Teeth <i>z</i>	Ref. Dia. <i>d</i>	Tip Dia. <i>d_a</i>	Bore H7 <i>d_j</i>	Max. Bore H7 <i>d_j</i>	Hub Dia. <i>BD</i>	Backlash (mm)		I Inertia <i>kgm²</i>	Mass <i>kg</i>
							<i>j_{t,e}</i> (max)	<i>j_{t,i}</i> (min)		
PHG2.0-15R	15	31.06	35.06	10	12	25	0.134	-0.053	2.09 x 10 ⁻⁵	0.170
PHG2.0-16R	16	33.13	37.13	10	12	25	0.134	-0.053	2.52 x 10 ⁻⁵	0.186
PHG2.0-17R	17	35.20	39.20	10	12	25	0.134	-0.053	3.03 x 10 ⁻⁵	0.203
PHG2.0-18R	18	37.27	41.27	10	12	25	0.134	-0.053	3.64 x 10 ⁻⁵	0.222
PHG2.0-19R	19	39.34	43.34	10	12	25	0.134	-0.053	4.36 x 10 ⁻⁵	0.241
PHG2.0-20R	20	41.41	45.41	10	12	25	0.134	-0.053	5.20 x 10 ⁻⁵	0.261
PHG2.0-21R	21	43.48	47.48	12	20	35	0.134	-0.053	7.86 x 10 ⁻⁵	0.346
PHG2.0-22R	22	45.55	49.55	12	20	35	0.134	-0.053	8.98 x 10 ⁻⁵	0.368
PHG2.0-23R	23	47.62	51.62	12	20	35	0.134	-0.053	1.03 x 10 ⁻⁴	0.392
PHG2.0-24R	24	49.69	53.69	12	20	35	0.134	-0.053	1.17 x 10 ⁻⁴	0.416
PHG2.0-25R	25	51.76	55.76	12	20	35	0.177	-0.072	1.34 x 10 ⁻⁴	0.442
PHG2.0-26R	26	53.83	57.83	12	20	35	0.177	-0.072	1.53 x 10 ⁻⁴	0.469
PHG2.0-27R	27	55.90	59.90	12	20	35	0.177	-0.072	1.73 x 10 ⁻⁴	0.497
PHG2.0-28R	28	57.98	61.98	14	25	45	0.177	-0.072	2.36 x 10 ⁻⁴	0.611
PHG2.0-29R	29	60.05	64.05	14	25	45	0.177	-0.072	2.62 x 10 ⁻⁴	0.641
PHG2.0-30R	30	62.12	66.12	14	25	45	0.177	-0.072	2.91 x 10 ⁻⁴	0.672
PHG2.0-32R	32	66.26	70.26	14	25	45	0.177	-0.072	3.58 x 10 ⁻⁴	0.737
PHG2.0-35R	35	72.47	76.47	14	25	45	0.177	-0.072	4.85 x 10 ⁻⁴	0.843
PHG2.0-38R	38	78.68	82.68	16	30	50	0.177	-0.072	6.82 x 10 ⁻⁴	1.001
PHG2.0-40R	40	82.82	86.82	16	30	50	0.179	-0.070	8.15 x 10 ⁻⁴	1.083
PHG2.0-42R	42	86.96	90.96	16	30	50	0.179	-0.070	9.70 x 10 ⁻⁴	1.169
PHG2.0-45R	45	93.17	97.17	16	30	50	0.179	-0.070	1.25 x 10 ⁻³	1.307
PHG2.0-48R	48	99.39	103.39	16	35	60	0.179	-0.070	1.69 x 10 ⁻³	1.589
PHG2.0-50R	50	103.53	107.53	16	35	60	0.179	-0.070	1.95 x 10 ⁻³	1.692
PHG2.0-52R	52	107.67	111.67	16	35	60	0.179	-0.070	2.25 x 10 ⁻³	1.799
PHG2.0-55R	55	113.88	117.88	16	35	60	0.179	-0.070	2.77 x 10 ⁻³	1.968
PHG2.0-58R	58	120.09	124.09	20	40	70	0.181	-0.068	3.54 x 10 ⁻³	2.272
PHG2.0-60R	60	124.23	128.23	20	40	70	0.181	-0.068	4.01 x 10 ⁻³	2.396
PHG2.0-62R	62	128.37	132.37	20	40	70	0.235	-0.101	4.52 x 10 ⁻³	2.524

PRECISION GEARS

2.0 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)

PHG
2.0m_n

Standard Part **PHG** **2.0** **50** **R**

Modified Part **PHG** **2.0** **50** **L** **H** **20** **K** **T**

PHG - Precision Helical Gear
Quality Grade 7e25 DIN 3961/3967
Other Quality Grades available.
See page 293

m_n Module - Cut with DIN 867 1.25/0.20/1.0
Ref. Tooth Profile Topping WD = 2.25 x m_n

Number of Teeth z

Right Hand Helix (R) runs with
Left Hand Helix (L)

Standard Material = 817M40T (28HRC)
H = 805M20 Case Hardened (58HRC)

T = 1 x Tapped hole 2T = 2 x Tapped holes.
P = 1 x Pin Hole PT = 1 x Pin Hole thru.
All threads metric as standard,
refer to page 308 for sizes and prices.

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
For prices see page 308

To specify different bore enter size required
Example: 20 = 20mm H7 etc
For prices see page 308

Quality Grades and Tolerances stated prior to heat treatment processes.

η Efficiency approx. 98%

Discounts: 6+ -5% 19+ -10%

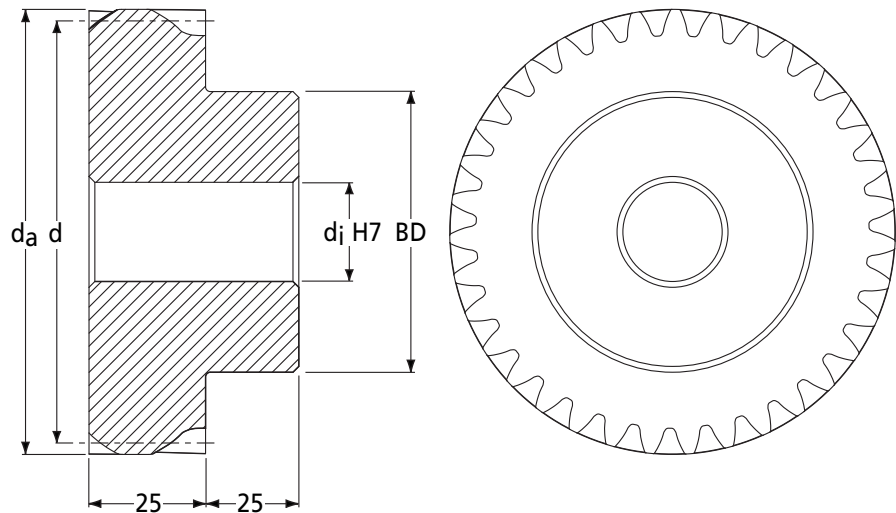
Part Number	817M40T (28HRC)		Part Number	Case Hardened 805M20 (58HRC)#	
	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5		T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5
PHG2.0-15R	9.72	£21.75	PHG2.0-15RH	35.65	£35.89
PHG2.0-16R	10.37	£22.83	PHG2.0-16RH	38.03	£37.68
PHG2.0-17R	11.02	£23.31	PHG2.0-17RH	40.41	£38.47
PHG2.0-18R	11.67	£23.89	PHG2.0-18RH	42.79	£39.43
PHG2.0-19R	12.32	£24.50	PHG2.0-19RH	45.16	£40.44
PHG2.0-20R	16.50	£25.01	PHG2.0-20RH	60.51	£41.27
PHG2.0-21R	17.33	£25.69	PHG2.0-21RH	63.53	£42.38
PHG2.0-22R	18.15	£26.15	PHG2.0-22RH	66.56	£43.14
PHG2.0-23R	18.98	£26.67	PHG2.0-23RH	69.58	£44.02
PHG2.0-24R	19.80	£27.24	PHG2.0-24RH	72.61	£44.96
PHG2.0-25R	20.63	£28.82	PHG2.0-25RH	75.63	£47.56
PHG2.0-26R	26.99	£29.66	PHG2.0-26RH	98.97	£48.97
PHG2.0-27R	28.03	£30.69	PHG2.0-27RH	102.78	£50.64
PHG2.0-28R	29.07	£31.38	PHG2.0-28RH	106.58	£51.79
PHG2.0-29R	30.11	£32.15	PHG2.0-29RH	110.39	£53.03
PHG2.0-30R	35.50	£32.84	PHG2.0-30RH	130.15	£54.20
PHG2.0-32R	37.86	£35.70	PHG2.0-32RH	138.83	£58.90
PHG2.0-35R	41.41	£39.43	PHG2.0-35RH	151.84	£65.07
PHG2.0-38R	44.96	£43.28	PHG2.0-38RH	164.86	£71.40
PHG2.0-40R	60.57	£45.07	PHG2.0-40RH	194.48	£74.37
PHG2.0-42R	63.59	£46.45	PHG2.0-42RH	204.20	£76.63
PHG2.0-45R	68.14	£48.48	PHG2.0-45RH	218.79	£80.01
PHG2.0-48R	72.68	£52.22	PHG2.0-48RH	233.37	£86.18
PHG2.0-50R	94.75	£55.90	PHG2.0-50RH	263.79	£92.24
PHG2.0-52R	98.54	£58.00	PHG2.0-52RH	274.34	£95.71
PHG2.0-55R	104.22	£65.48	PHG2.0-55RH	290.17	£108.04
PHG2.0-58R	109.91	£69.46	PHG2.0-58RH	306.00	£114.60
PHG2.0-60R	129.47	£71.23	PHG2.0-60RH	329.60	£117.52
PHG2.0-62R	133.79	£72.94	PHG2.0-62RH	340.59	£120.35

PHG
2.5m_n

PRECISION GEARS

2.5 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)



DIN 3967 Tooth Thickness tol.

Part Number	No. of Teeth z	Ref. Dia. d	Tip Dia. d _a	Bore H7 d _j	Max. Bore H7 d _j	Hub Dia. BD	Backlash (mm)		I Inertia kgm ²	Mass kg
							j _{t,e} (max)	j _{t,i} (min)		
PHG2.5-15R	15	38.82	43.82	12	16	30	0.134 - 0.053	6.12 x 10 ⁻⁵	0.324	
PHG2.5-16R	16	41.41	46.41	12	16	30	0.134 - 0.053	7.42 x 10 ⁻⁵	0.356	
PHG2.5-17R	17	44.00	49.00	12	16	30	0.134 - 0.053	8.99 x 10 ⁻⁵	0.389	
PHG2.5-18R	18	46.59	51.59	12	16	30	0.134 - 0.053	1.09 x 10 ⁻⁴	0.425	
PHG2.5-19R	19	49.18	54.18	12	16	30	0.134 - 0.053	1.30 x 10 ⁻⁴	0.463	
PHG2.5-20R	20	51.76	56.76	12	16	30	0.177 - 0.072	1.56 x 10 ⁻⁴	0.502	
PHG2.5-21R	21	54.35	59.35	14	22	45	0.177 - 0.072	2.49 x 10 ⁻⁴	0.702	
PHG2.5-22R	22	56.94	61.94	14	22	45	0.177 - 0.072	2.83 x 10 ⁻⁴	0.745	
PHG2.5-23R	23	59.53	64.53	14	22	45	0.177 - 0.072	3.22 x 10 ⁻⁴	0.791	
PHG2.5-24R	24	62.12	67.12	14	22	45	0.177 - 0.072	3.67 x 10 ⁻⁴	0.839	
PHG2.5-25R	25	64.70	69.70	14	22	45	0.177 - 0.072	4.17 x 10 ⁻⁴	0.889	
PHG2.5-26R	26	67.29	72.29	14	22	45	0.177 - 0.072	4.74 x 10 ⁻⁴	0.942	
PHG2.5-27R	27	69.88	74.88	14	22	45	0.177 - 0.072	5.38 x 10 ⁻⁴	0.996	
PHG2.5-28R	28	72.47	77.47	16	30	55	0.177 - 0.072	7.06 x 10 ⁻⁴	1.188	
PHG2.5-29R	29	75.06	80.06	16	30	55	0.177 - 0.072	7.85 x 10 ⁻⁴	1.246	
PHG2.5-30R	30	77.65	82.65	16	30	55	0.177 - 0.072	8.74 x 10 ⁻⁴	1.307	
PHG2.5-32R	32	82.82	87.82	16	30	55	0.179 - 0.070	1.08 x 10 ⁻³	1.434	
PHG2.5-35R	35	90.59	95.59	16	30	55	0.179 - 0.070	1.47 x 10 ⁻³	1.640	
PHG2.5-38R	38	98.35	103.35	16	35	65	0.179 - 0.070	2.13 x 10 ⁻³	2.050	
PHG2.5-40R	40	103.53	108.53	16	35	65	0.179 - 0.070	2.54 x 10 ⁻³	2.210	
PHG2.5-42R	42	108.70	113.70	16	35	65	0.179 - 0.070	3.01 x 10 ⁻³	2.380	
PHG2.5-45R	45	116.47	121.47	20	40	75	0.179 - 0.070	4.12 x 10 ⁻³	2.817	
PHG2.5-48R	48	124.23	129.23	20	40	75	0.181 - 0.068	5.16 x 10 ⁻³	3.104	
PHG2.5-50R	50	129.41	134.41	20	40	75	0.235 - 0.101	5.96 x 10 ⁻³	3.305	

PRECISION GEARS

2.5 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)

PHG
2.5m_n

Standard Part **PHG** **2.5** - **50** **R**
Modified Part **PHG** **2.5** - **50** **L** **H** **25** **K** **T**

PHG - Precision Helical Gear
Quality Grade 7e25 DIN 3961/3967
Other Quality Grades available.
See page 293

m_n Module - Cut with DIN 867 1.25/0.20/1.0
Ref. Tooth Profile Topping WD = 2.25 x m_n

Number of Teeth z

Right Hand Helix (R) runs with
Left Hand Helix (L)

Standard Material = 817M40T (28HRC)
H = 805M20 Case Hardened (58HRC)

T = 1 x Tapped hole 2T = 2 x Tapped holes.
P = 1 x Pin Hole PT = 1 x Pin Hole thru.
All threads metric as standard,
refer to page 308 for sizes and prices.

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
For prices see page 308

To specify different bore enter size required
Example: 25 = 25mm H7 etc
For prices see page 308

Quality Grades and Tolerances stated prior to heat treatment processes.

η Efficiency approx. 98%

Discounts: 6+ -5% 19+ -10%

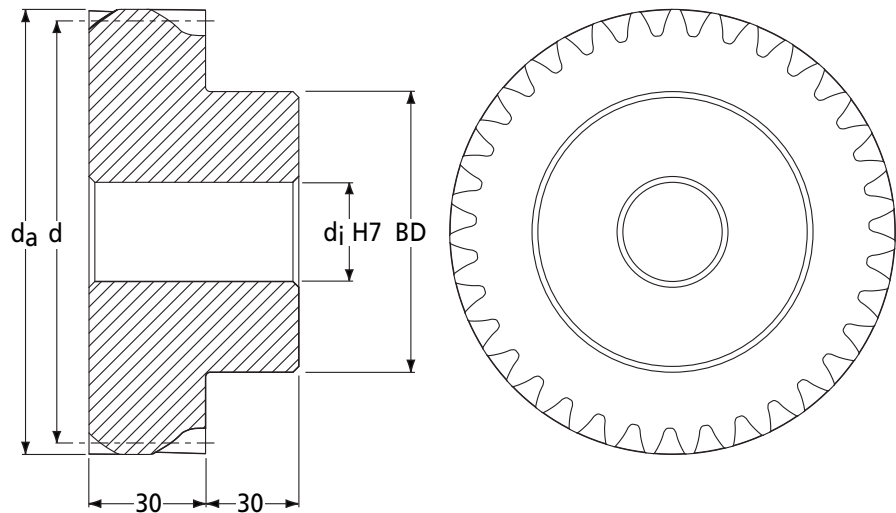
Part Number	817M40T (28HRC)		Case Hardened 805M20 (58HRC)#		
	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5	Part Number	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5
PHG2.5-15R	18.16	£28.83	PHG2.5-15RH	66.60	£47.58
PHG2.5-16R	19.37	£30.54	PHG2.5-16RH	71.04	£50.40
PHG2.5-17R	20.59	£31.16	PHG2.5-17RH	75.48	£51.41
PHG2.5-18R	21.80	£32.27	PHG2.5-18RH	79.92	£53.25
PHG2.5-19R	23.01	£33.14	PHG2.5-19RH	84.36	£54.69
PHG2.5-20R	30.82	£34.33	PHG2.5-20RH	113.02	£56.64
PHG2.5-21R	32.36	£35.17	PHG2.5-21RH	118.67	£58.04
PHG2.5-22R	33.90	£36.43	PHG2.5-22RH	124.32	£60.12
PHG2.5-23R	35.45	£37.34	PHG2.5-23RH	129.97	£61.63
PHG2.5-24R	36.99	£38.44	PHG2.5-24RH	135.62	£63.42
PHG2.5-25R	38.53	£40.51	PHG2.5-25RH	141.27	£66.86
PHG2.5-26R	50.42	£42.56	PHG2.5-26RH	184.86	£70.23
PHG2.5-27R	52.36	£43.43	PHG2.5-27RH	191.97	£71.68
PHG2.5-28R	54.30	£44.64	PHG2.5-28RH	199.08	£73.66
PHG2.5-29R	56.23	£46.07	PHG2.5-29RH	206.19	£76.03
PHG2.5-30R	66.30	£47.64	PHG2.5-30RH	243.11	£78.62
PHG2.5-32R	70.72	£50.49	PHG2.5-32RH	259.32	£83.31
PHG2.5-35R	77.35	£52.62	PHG2.5-35RH	283.63	£86.83
PHG2.5-38R	83.98	£57.79	PHG2.5-38RH	307.94	£95.37
PHG2.5-40R	113.13	£60.07	PHG2.5-40RH	379.84	£99.13
PHG2.5-42R	118.79	£61.93	PHG2.5-42RH	398.83	£102.19
PHG2.5-45R	127.27	£64.11	PHG2.5-45RH	427.31	£105.78
PHG2.5-48R	135.75	£68.69	PHG2.5-48RH	455.80	£113.32
PHG2.5-50R	176.98	£71.83	PHG2.5-50RH	515.22	£118.51

PHG
3.0m_n

PRECISION GEARS

3.0 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)



DIN 3967 Tooth Thickness tol.

Part Number	No. of Teeth <i>z</i>	Ref. Dia. <i>d</i>	Tip Dia. <i>d_a</i>	Bore H7 <i>d_j</i>	Max. Bore H7 <i>d_j</i>	Hub Dia. BD	Backlash (mm)		I Inertia kgm ²	Mass kg
							<i>j_{t,e}</i> (max)	<i>j_{t,i}</i> (min)		
PHG3.0-15R	15	46.59	52.59	14	20	38	0.134 - 0.053	1.62 x 10 ⁻⁴	0.592	
PHG3.0-16R	16	49.69	55.69	14	20	38	0.134 - 0.053	1.94 x 10 ⁻⁴	0.646	
PHG3.0-17R	17	52.80	58.80	14	20	38	0.177 - 0.072	2.33 x 10 ⁻⁴	0.704	
PHG3.0-18R	18	55.90	61.90	14	20	38	0.177 - 0.072	2.80 x 10 ⁻⁴	0.766	
PHG3.0-19R	19	59.01	65.01	14	20	38	0.177 - 0.072	3.34 x 10 ⁻⁴	0.831	
PHG3.0-20R	20	62.12	68.12	14	20	38	0.177 - 0.072	3.98 x 10 ⁻⁴	0.900	
PHG3.0-21R	21	65.22	71.22	14	20	38	0.177 - 0.072	4.72 x 10 ⁻⁴	0.972	
PHG3.0-22R	22	68.33	74.33	16	30	55	0.177 - 0.072	7.20 x 10 ⁻⁴	1.318	
PHG3.0-23R	23	71.43	77.43	16	30	55	0.177 - 0.072	8.17 x 10 ⁻⁴	1.397	
PHG3.0-24R	24	74.54	80.54	16	30	55	0.177 - 0.072	9.28 x 10 ⁻⁴	1.480	
PHG3.0-25R	25	77.65	83.65	16	30	55	0.179 - 0.070	1.05 x 10 ⁻³	1.567	
PHG3.0-26R	26	80.75	86.75	16	30	55	0.179 - 0.070	1.20 x 10 ⁻³	1.657	
PHG3.0-27R	27	83.86	89.86	16	30	55	0.179 - 0.070	1.36 x 10 ⁻³	1.751	
PHG3.0-28R	28	86.96	92.96	16	30	55	0.179 - 0.070	1.53 x 10 ⁻³	1.848	
PHG3.0-29R	29	90.07	96.07	20	40	70	0.179 - 0.070	2.07 x 10 ⁻³	2.240	
PHG3.0-30R	30	93.17	99.17	20	40	70	0.179 - 0.070	2.29 x 10 ⁻³	2.350	
PHG3.0-32R	32	99.39	105.39	20	40	70	0.179 - 0.070	2.80 x 10 ⁻³	2.570	
PHG3.0-35R	35	108.70	114.70	20	40	70	0.179 - 0.070	3.76 x 10 ⁻³	2.920	
PHG3.0-38R	38	118.02	124.02	20	40	70	0.179 - 0.070	5.01 x 10 ⁻³	3.310	
PHG3.0-40R	40	124.23	130.23	20	40	70	0.181 - 0.069	6.02 x 10 ⁻³	3.590	

PRECISION GEARS

3.0 Module 15° Parallel Helical Gear α 20° PA

Quality Grade 7e25 DIN 3961/3967 (AGMA Q10)

PHG
3.0m_n

Standard Part PHG 3.0-40 R

Modified Part PHG 3.0-40 L H 30 K T

PHG - Precision Helical Gear
Quality Grade 7e25 DIN 3961/3967
Other Quality Grades available.
See page 293

m_n Module - Cut with DIN 867 1.25/0.20/1.0
Ref. Tooth Profile Topping WD = 2.25 x m_n

Number of Teeth z

Right Hand Helix (R) runs with
Left Hand Helix (L)

Standard Material = 817M40T (28HRC)
H = 805M20 Case Hardened (58HRC)

T = 1 x Tapped hole 2T = 2 x Tapped holes.
P = 1 x Pin Hole PT = 1 x Pin Hole thru.
All threads metric as standard,
refer to page 308 for sizes and prices.

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
For prices see page 308

To specify different bore enter size required
Example: 30 = 30mm H7 etc
For prices see page 308

Quality Grades and Tolerances stated prior to heat treatment processes.

η Efficiency approx. 98%

Discounts: 6+ -5% 19+ -10%

Part Number	817M40T (28HRC)		Case Hardened 805M20 (58HRC)#		
	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5	Part Number	T ₂ Nm n ₂ 100min ⁻¹	Price Each 1 - 5
PHG3.0-15R	30.26	£40.12	PHG3.0-15RH	110.96	£66.20
PHG3.0-16R	32.28	£41.62	PHG3.0-16RH	118.36	£68.67
PHG3.0-17R	34.30	£42.93	PHG3.0-17RH	125.76	£70.84
PHG3.0-18R	36.31	£44.39	PHG3.0-18RH	133.15	£73.24
PHG3.0-19R	38.33	£45.93	PHG3.0-19RH	140.55	£75.79
PHG3.0-20R	51.35	£47.35	PHG3.0-20RH	188.30	£78.13
PHG3.0-21R	53.92	£48.73	PHG3.0-21RH	197.71	£80.40
PHG3.0-22R	56.49	£51.63	PHG3.0-22RH	207.13	£85.20
PHG3.0-23R	59.06	£54.48	PHG3.0-23RH	216.54	£89.91
PHG3.0-24R	61.62	£55.86	PHG3.0-24RH	225.96	£92.16
PHG3.0-25R	64.19	£57.50	PHG3.0-25RH	235.37	£94.88
PHG3.0-26R	84.00	£59.24	PHG3.0-26RH	308.00	£97.74
PHG3.0-27R	87.23	£61.37	PHG3.0-27RH	319.85	£101.28
PHG3.0-28R	90.46	£65.86	PHG3.0-28RH	331.70	£108.67
PHG3.0-29R	93.69	£76.29	PHG3.0-29RH	343.54	£125.88
PHG3.0-30R	110.47	£81.91	PHG3.0-30RH	405.05	£135.15
PHG3.0-32R	117.83	£84.16	PHG3.0-32RH	432.05	£138.87
PHG3.0-35R	128.88	£86.69	PHG3.0-35RH	472.56	£143.06
PHG3.0-38R	139.93	£123.29	PHG3.0-38RH	513.06	£203.42
PHG3.0-40R	188.49	£126.67	PHG3.0-40RH	656.36	£209.01