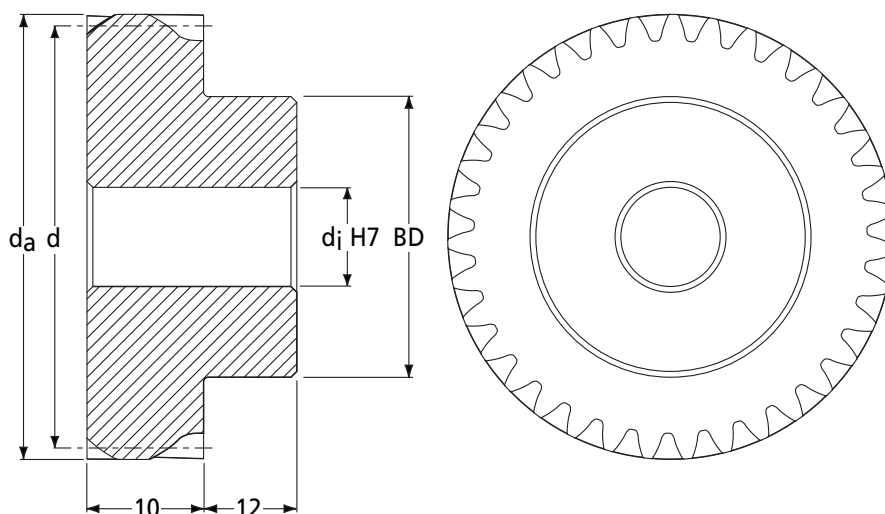


PHG
1.0m_n

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

PRECISION GEARS

PHG
1.0m_n

1.0 Module 15° Parallel Helical Gear α 20° PA

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

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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