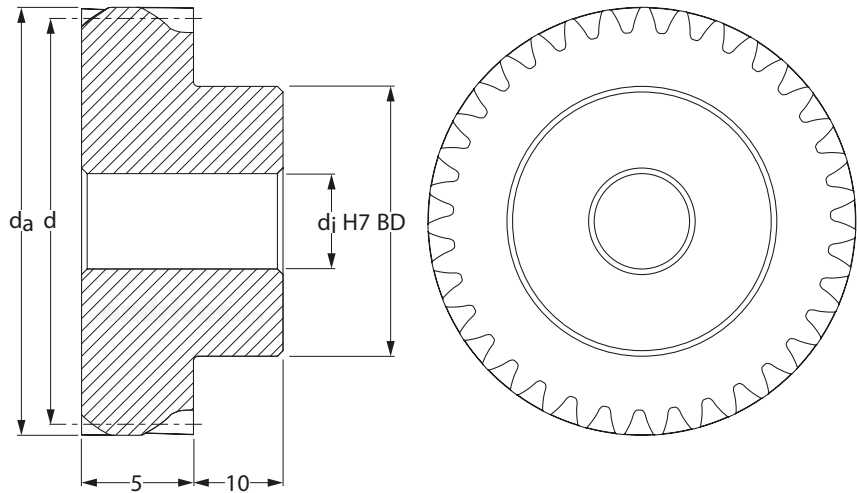


PHG-R
PHG-L
0.5m_n

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 Standard 817M40T		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>
RH	LH						
PHG0.5-20R	PHG0.5-20L	20	10.35	11.35	4	4	8
PHG0.5-21R	PHG0.5-21L	21	10.87	11.87	4	4	8
PHG0.5-22R	PHG0.5-22L	22	11.39	12.39	4	4	8
PHG0.5-23R	PHG0.5-23L	23	11.91	12.91	4	4	8
PHG0.5-24R	PHG0.5-24L	24	12.42	13.42	5	5	10
PHG0.5-25R	PHG0.5-25L	25	12.94	13.94	5	5	10
PHG0.5-26R	PHG0.5-26L	26	13.46	14.46	5	5	10
PHG0.5-27R	PHG0.5-27L	27	13.98	14.98	5	5	10
PHG0.5-28R	PHG0.5-28L	28	14.49	15.49	5	5	10
PHG0.5-29R	PHG0.5-29L	29	15.01	16.01	6	6	13
PHG0.5-30R	PHG0.5-30L	30	15.53	16.53	6	6	13
PHG0.5-32R	PHG0.5-32L	32	16.56	17.56	6	6	13
PHG0.5-35R	PHG0.5-35L	35	18.12	19.12	6	6	13
PHG0.5-38R	PHG0.5-38L	38	19.67	20.67	6	10	18
PHG0.5-40R	PHG0.5-40L	40	20.71	21.71	6	10	18
PHG0.5-42R	PHG0.5-42L	42	21.74	22.74	6	10	18
PHG0.5-45R	PHG0.5-45L	45	23.29	24.29	6	10	18
PHG0.5-48R	PHG0.5-48L	48	24.85	25.85	6	10	18
PHG0.5-50R	PHG0.5-50L	50	25.88	26.88	6	10	18
PHG0.5-52R	PHG0.5-52L	52	26.92	27.92	6	12	25
PHG0.5-55R	PHG0.5-55L	55	28.47	29.47	6	12	25
PHG0.5-58R	PHG0.5-58L	58	30.02	31.02	6	12	25
PHG0.5-60R	PHG0.5-60L	60	31.06	32.06	6	12	25
PHG0.5-62R	PHG0.5-62L	62	32.09	33.09	6	12	25
PHG0.5-65R	PHG0.5-65L	65	33.65	34.65	6	12	25
PHG0.5-68R	PHG0.5-68L	68	35.20	36.20	6	12	25
PHG0.5-70R	PHG0.5-70L	70	36.23	37.23	6	12	25
PHG0.5-72R	PHG0.5-72L	72	37.27	38.27	6	12	25
PHG0.5-75R	PHG0.5-75L	75	38.82	39.82	6	12	25
PHG0.5-78R	PHG0.5-78L	78	40.38	41.38	8	16	35
PHG0.5-80R	PHG0.5-80L	80	41.41	42.41	8	16	35
PHG0.5-82R	PHG0.5-82L	82	42.45	43.45	8	16	35
PHG0.5-85R	PHG0.5-85L	85	44.00	45.00	8	16	35
PHG0.5-90R	PHG0.5-90L	90	46.59	47.59	8	16	35
PHG0.5-100R	PHG0.5-100L	100	51.76	52.76	8	16	35
PHG0.5-120R	PHG0.5-120L	120	62.12	63.12	8	16	35
PHG0.5-130R	PHG0.5-130L	130	67.29	68.29	12	25	45
PHG0.5-140R	PHG0.5-140L	140	72.47	73.47	12	25	45
PHG0.5-150R	PHG0.5-150L	150	77.65	78.65	12	25	45
PHG0.5-200R	PHG0.5-200L	200	103.53	104.53	14	30	55
PHG0.5-210R	PHG0.5-210L	210	108.70	109.70	16	40	65
PHG0.5-220R	PHG0.5-220L	220	113.88	114.88	16	40	65
PHG0.5-230R	PHG0.5-230L	230	119.06	120.06	16	40	65

PHG-R
PHG-L
0.5m_n

PRECISION GEARS

0.5 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG** **0.5** **50** **R**

Modified Part **PHG** **0.5** **50** **L** **H** **12** **K** **T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 12 = 12mm H7 etc
See Technical

η_z Meshing Efficiency approx. 98%

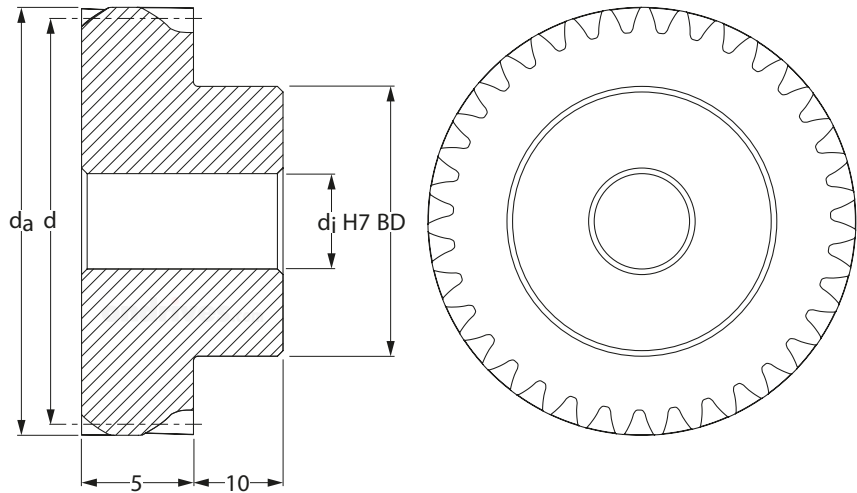
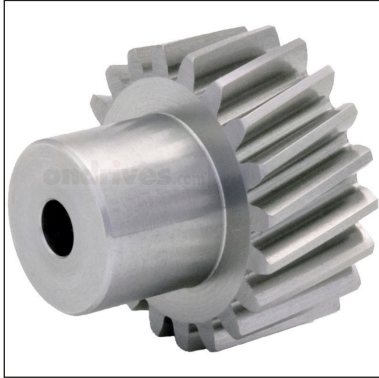
Part Number Standard 817M40T		Backlash (mm)		Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	j _{t.e} (max)	j _{t.i} (min)			
PHG0.5-20R	PHG0.5-20L	0.079 - 0.037		7.38 x 10 ⁻⁸	0.006	0.34
PHG0.5-21R	PHG0.5-21L	0.079 - 0.037		8.34 x 10 ⁻⁸	0.007	0.36
PHG0.5-22R	PHG0.5-22L	0.079 - 0.037		9.43 x 10 ⁻⁸	0.007	0.37
PHG0.5-23R	PHG0.5-23L	0.079 - 0.037		1.07 x 10 ⁻⁷	0.007	0.39
PHG0.5-24R	PHG0.5-24L	0.091 - 0.044		1.62 x 10 ⁻⁷	0.009	0.41
PHG0.5-25R	PHG0.5-25L	0.091 - 0.044		1.79 x 10 ⁻⁷	0.009	0.43
PHG0.5-26R	PHG0.5-26L	0.091 - 0.044		1.97 x 10 ⁻⁷	0.009	0.56
PHG0.5-27R	PHG0.5-27L	0.091 - 0.044		2.17 x 10 ⁻⁷	0.010	0.58
PHG0.5-28R	PHG0.5-28L	0.091 - 0.044		2.40 x 10 ⁻⁷	0.010	0.60
PHG0.5-29R	PHG0.5-29L	0.091 - 0.044		4.37 x 10 ⁻⁷	0.015	0.62
PHG0.5-30R	PHG0.5-30L	0.091 - 0.044		4.65 x 10 ⁻⁷	0.015	0.73
PHG0.5-32R	PHG0.5-32L	0.091 - 0.044		5.30 x 10 ⁻⁷	0.016	0.78
PHG0.5-35R	PHG0.5-35L	0.092 - 0.043		6.54 x 10 ⁻⁷	0.018	0.85
PHG0.5-38R	PHG0.5-38L	0.092 - 0.043		1.37 x 10 ⁻⁶	0.028	0.93
PHG0.5-40R	PHG0.5-40L	0.092 - 0.043		1.50 x 10 ⁻⁶	0.030	1.25
PHG0.5-42R	PHG0.5-42L	0.092 - 0.043		1.65 x 10 ⁻⁶	0.031	1.31
PHG0.5-45R	PHG0.5-45L	0.092 - 0.043		1.92 x 10 ⁻⁶	0.033	1.40
PHG0.5-48R	PHG0.5-48L	0.092 - 0.043		2.25 x 10 ⁻⁶	0.036	1.50
PHG0.5-50R	PHG0.5-50L	0.100 - 0.047		2.51 x 10 ⁻⁶	0.037	1.95
PHG0.5-52R	PHG0.5-52L	0.100 - 0.047		5.00 x 10 ⁻⁶	0.057	2.03
PHG0.5-55R	PHG0.5-55L	0.100 - 0.047		5.51 x 10 ⁻⁶	0.060	2.15
PHG0.5-58R	PHG0.5-58L	0.102 - 0.046		6.10 x 10 ⁻⁶	0.063	2.27
PHG0.5-60R	PHG0.5-60L	0.102 - 0.046		6.55 x 10 ⁻⁶	0.065	2.67
PHG0.5-62R	PHG0.5-62L	0.102 - 0.046		7.05 x 10 ⁻⁶	0.067	2.76
PHG0.5-65R	PHG0.5-65L	0.102 - 0.046		7.89 x 10 ⁻⁶	0.070	2.89
PHG0.5-68R	PHG0.5-68L	0.102 - 0.046		8.86 x 10 ⁻⁶	0.073	3.03
PHG0.5-70R	PHG0.5-70L	0.102 - 0.046		9.59 x 10 ⁻⁶	0.075	3.11
PHG0.5-72R	PHG0.5-72L	0.102 - 0.046		1.04 x 10 ⁻⁵	0.078	3.20
PHG0.5-75R	PHG0.5-75L	0.102 - 0.046		1.17 x 10 ⁻⁵	0.081	3.34
PHG0.5-78R	PHG0.5-78L	0.102 - 0.046		1.64 x 10 ⁻⁵	0.119	3.47
PHG0.5-80R	PHG0.5-80L	0.102 - 0.046		1.74 x 10 ⁻⁵	0.122	4.60
PHG0.5-82R	PHG0.5-82L	0.102 - 0.046		2.39 x 10 ⁻⁵	0.125	4.71
PHG0.5-85R	PHG0.5-85L	0.102 - 0.046		2.59 x 10 ⁻⁵	0.129	4.89
PHG0.5-90R	PHG0.5-90L	0.102 - 0.046		2.95 x 10 ⁻⁵	0.136	5.17
PHG0.5-100R	PHG0.5-100L	0.115 - 0.097		3.90 x 10 ⁻⁵	0.151	5.89
PHG0.5-120R	PHG0.5-120L	0.115 - 0.097		6.85 x 10 ⁻⁵	0.188	7.07
PHG0.5-130R	PHG0.5-130L	0.115 - 0.097		1.10 x 10 ⁻⁴	0.251	7.66
PHG0.5-140R	PHG0.5-140L	0.115 - 0.097		1.37 x 10 ⁻⁴	0.273	8.25
PHG0.5-150R	PHG0.5-150L	0.115 - 0.097		1.71 x 10 ⁻⁴	0.297	9.03
PHG0.5-200R	PHG0.5-200L	0.139 - 0.066		5.11 x 10 ⁻⁴	0.498	12.17
PHG0.5-210R	PHG0.5-210L	0.139 - 0.066		6.73 x 10 ⁻⁴	0.600	12.77
PHG0.5-220R	PHG0.5-220L	0.139 - 0.066		7.82 x 10 ⁻⁴	0.636	13.38
PHG0.5-230R	PHG0.5-230L	0.139 - 0.066		9.08 x 10 ⁻⁴	0.673	13.99

PHG-RH
PHG-LH
0.5m_n

PRECISION GEARS

0.5 Module 15° Parallel Helical Gear α 20° PA

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



DIN 58405 Tooth Thickness tol.

Part Number 805M20# Case Hardened		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>
RH	LH						
PHG0.5-20RH	PHG0.5-20LH	20	10.35	11.35	4	4	8
PHG0.5-21RH	PHG0.5-21LH	21	10.87	11.87	4	4	8
PHG0.5-22RH	PHG0.5-22LH	22	11.39	12.39	4	4	8
PHG0.5-23RH	PHG0.5-23LH	23	11.91	12.91	4	4	8
PHG0.5-24RH	PHG0.5-24LH	24	12.42	13.42	5	5	10
PHG0.5-25RH	PHG0.5-25LH	25	12.94	13.94	5	5	10
PHG0.5-26RH	PHG0.5-26LH	26	13.46	14.46	5	5	10
PHG0.5-27RH	PHG0.5-27LH	27	13.98	14.98	5	5	10
PHG0.5-28RH	PHG0.5-28LH	28	14.49	15.49	5	5	10
PHG0.5-29RH	PHG0.5-29LH	29	15.01	16.01	6	6	13
PHG0.5-30RH	PHG0.5-30LH	30	15.53	16.53	6	6	13
PHG0.5-32RH	PHG0.5-32LH	32	16.56	17.56	6	6	13
PHG0.5-35RH	PHG0.5-35LH	35	18.12	19.12	6	6	13
PHG0.5-38RH	PHG0.5-38LH	38	19.67	20.67	6	10	18
PHG0.5-40RH	PHG0.5-40LH	40	20.71	21.71	6	10	18
PHG0.5-42RH	PHG0.5-42LH	42	21.74	22.74	6	10	18
PHG0.5-45RH	PHG0.5-45LH	45	23.29	24.29	6	10	18
PHG0.5-48RH	PHG0.5-48LH	48	24.85	25.85	6	10	18
PHG0.5-50RH	PHG0.5-50LH	50	25.88	26.88	6	10	18
PHG0.5-52RH	PHG0.5-52LH	52	26.92	27.92	6	12	25
PHG0.5-55RH	PHG0.5-55LH	55	28.47	29.47	6	12	25
PHG0.5-58RH	PHG0.5-58LH	58	30.02	31.02	6	12	25
PHG0.5-60RH	PHG0.5-60LH	60	31.06	32.06	6	12	25
PHG0.5-62RH	PHG0.5-62LH	62	32.09	33.09	6	12	25
PHG0.5-65RH	PHG0.5-65LH	65	33.65	34.65	6	12	25
PHG0.5-68RH	PHG0.5-68LH	68	35.20	36.20	6	12	25
PHG0.5-70RH	PHG0.5-70LH	70	36.23	37.23	6	12	25
PHG0.5-72RH	PHG0.5-72LH	72	37.27	38.27	6	12	25
PHG0.5-75RH	PHG0.5-75LH	75	38.82	39.82	6	12	25
PHG0.5-78RH	PHG0.5-78LH	78	40.38	41.38	8	16	35
PHG0.5-80RH	PHG0.5-80LH	80	41.41	42.41	8	16	35
PHG0.5-82RH	PHG0.5-82LH	82	42.45	43.45	8	16	35
PHG0.5-85RH	PHG0.5-85LH	85	44.00	45.00	8	16	35
PHG0.5-90RH	PHG0.5-90LH	90	46.59	47.59	8	16	35
PHG0.5-100RH	PHG0.5-100LH	100	51.76	52.76	8	16	35
PHG0.5-120RH	PHG0.5-120LH	120	62.12	63.12	8	16	35
PHG0.5-130RH	PHG0.5-130LH	130	67.29	68.29	12	25	45
PHG0.5-140RH	PHG0.5-140LH	140	72.47	73.47	12	25	45
PHG0.5-150RH	PHG0.5-150LH	150	77.65	78.65	12	25	45
PHG0.5-200RH	PHG0.5-200LH	200	103.53	104.53	14	30	55
PHG0.5-210RH	PHG0.5-210LH	210	108.70	109.70	16	40	65
PHG0.5-220RH	PHG0.5-220LH	220	113.88	114.88	16	40	65
PHG0.5-230RH	PHG0.5-230LH	230	119.06	120.06	16	40	65

PHG-RH
PHG-LH
0.5m_n

PRECISION GEARS

0.5 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG 0.5-50 R**

Modified Part **PHG 0.5-50 L H 12 K T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 12 = 12mm H7 etc
See Technical

Quality Grades and Tolerances stated prior to heat treatment processes.
η_z Meshing Efficiency approx. 98%

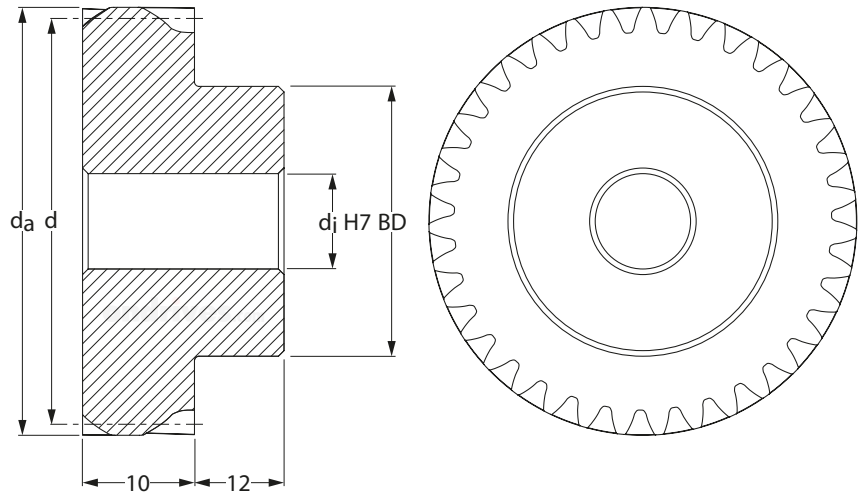
Part Number 805M20# Case Hardened		Backlash (mm)		Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	j _{t.e} (max)	j _{t.i} (min)			
PHG0.5-20RH	PHG0.5-20LH	0.079 - 0.037		7.38 x 10 ⁻⁸	0.006	1.25
PHG0.5-21RH	PHG0.5-21LH	0.079 - 0.037		8.34 x 10 ⁻⁸	0.007	1.31
PHG0.5-22RH	PHG0.5-22LH	0.079 - 0.037		9.43 x 10 ⁻⁸	0.007	1.37
PHG0.5-23RH	PHG0.5-23LH	0.079 - 0.037		1.07 x 10 ⁻⁷	0.007	1.43
PHG0.5-24RH	PHG0.5-24LH	0.091 - 0.044		1.62 x 10 ⁻⁷	0.009	1.50
PHG0.5-25RH	PHG0.5-25LH	0.091 - 0.044		1.79 x 10 ⁻⁷	0.009	1.56
PHG0.5-26RH	PHG0.5-26LH	0.091 - 0.044		1.97 x 10 ⁻⁷	0.009	1.79
PHG0.5-27RH	PHG0.5-27LH	0.091 - 0.044		2.17 x 10 ⁻⁷	0.010	1.86
PHG0.5-28RH	PHG0.5-28LH	0.091 - 0.044		2.40 x 10 ⁻⁷	0.010	1.92
PHG0.5-29RH	PHG0.5-29LH	0.091 - 0.044		4.37 x 10 ⁻⁷	0.015	1.99
PHG0.5-30RH	PHG0.5-30LH	0.091 - 0.044		4.65 x 10 ⁻⁷	0.015	2.05
PHG0.5-32RH	PHG0.5-32LH	0.091 - 0.044		5.30 x 10 ⁻⁷	0.016	2.19
PHG0.5-35RH	PHG0.5-35LH	0.092 - 0.043		6.54 x 10 ⁻⁷	0.018	2.39
PHG0.5-38RH	PHG0.5-38LH	0.092 - 0.043		1.37 x 10 ⁻⁶	0.028	2.60
PHG0.5-40RH	PHG0.5-40LH	0.092 - 0.043		1.50 x 10 ⁻⁶	0.030	3.04
PHG0.5-42RH	PHG0.5-42LH	0.092 - 0.043		1.65 x 10 ⁻⁶	0.031	3.19
PHG0.5-45RH	PHG0.5-45LH	0.092 - 0.043		1.92 x 10 ⁻⁶	0.033	3.42
PHG0.5-48RH	PHG0.5-48LH	0.092 - 0.043		2.25 x 10 ⁻⁶	0.036	3.65
PHG0.5-50RH	PHG0.5-50LH	0.100 - 0.047		2.51 x 10 ⁻⁶	0.037	4.12
PHG0.5-52RH	PHG0.5-52LH	0.100 - 0.047		5.00 x 10 ⁻⁶	0.057	4.29
PHG0.5-55RH	PHG0.5-55LH	0.100 - 0.047		5.51 x 10 ⁻⁶	0.060	4.53
PHG0.5-58RH	PHG0.5-58LH	0.102 - 0.046		6.10 x 10 ⁻⁶	0.063	4.78
PHG0.5-60RH	PHG0.5-60LH	0.102 - 0.046		6.55 x 10 ⁻⁶	0.065	5.15
PHG0.5-62RH	PHG0.5-62LH	0.102 - 0.046		7.05 x 10 ⁻⁶	0.067	5.32
PHG0.5-65RH	PHG0.5-65LH	0.102 - 0.046		7.89 x 10 ⁻⁶	0.070	5.58
PHG0.5-68RH	PHG0.5-68LH	0.102 - 0.046		8.86 x 10 ⁻⁶	0.073	5.84
PHG0.5-70RH	PHG0.5-70LH	0.102 - 0.046		9.59 x 10 ⁻⁶	0.075	6.01
PHG0.5-72RH	PHG0.5-72LH	0.102 - 0.046		1.04 x 10 ⁻⁵	0.078	6.18
PHG0.5-75RH	PHG0.5-75LH	0.102 - 0.046		1.17 x 10 ⁻⁵	0.081	6.44
PHG0.5-78RH	PHG0.5-78LH	0.102 - 0.046		1.64 x 10 ⁻⁵	0.119	6.69
PHG0.5-80RH	PHG0.5-80LH	0.102 - 0.046		1.74 x 10 ⁻⁵	0.122	7.20
PHG0.5-82RH	PHG0.5-82LH	0.102 - 0.046		2.39 x 10 ⁻⁵	0.125	7.38
PHG0.5-85RH	PHG0.5-85LH	0.102 - 0.046		2.59 x 10 ⁻⁵	0.129	7.65
PHG0.5-90RH	PHG0.5-90LH	0.102 - 0.046		2.95 x 10 ⁻⁵	0.136	8.10
PHG0.5-100RH	PHG0.5-100LH	0.115 - 0.097		3.90 x 10 ⁻⁵	0.151	9.21
PHG0.5-120RH	PHG0.5-120LH	0.115 - 0.097		6.85 x 10 ⁻⁵	0.188	11.05
PHG0.5-130RH	PHG0.5-130LH	0.115 - 0.097		1.10 x 10 ⁻⁴	0.251	11.97
PHG0.5-140RH	PHG0.5-140LH	0.115 - 0.097		1.37 x 10 ⁻⁴	0.273	12.89
PHG0.5-150RH	PHG0.5-150LH	0.115 - 0.097		1.71 x 10 ⁻⁴	0.297	14.11
PHG0.5-200RH	PHG0.5-200LH	0.139 - 0.066		5.11 x 10 ⁻⁴	0.498	19.01
PHG0.5-210RH	PHG0.5-210LH	0.139 - 0.066		6.73 x 10 ⁻⁴	0.600	19.96
PHG0.5-220RH	PHG0.5-220LH	0.139 - 0.066		7.82 x 10 ⁻⁴	0.636	20.91
PHG0.5-230RH	PHG0.5-230LH	0.139 - 0.066		9.08 x 10 ⁻⁴	0.673	21.86

PHG-R
PHG-L
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 Standard 817M40T		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>
RH	LH						
PHG1.0-15R	PHG1.0-15L	15	15.53	17.53	5	5	13
PHG1.0-16R	PHG1.0-16L	16	16.56	18.56	5	5	13
PHG1.0-17R	PHG1.0-17L	17	17.60	19.60	5	5	13
PHG1.0-18R	PHG1.0-18L	18	18.63	20.63	5	5	13
PHG1.0-19R	PHG1.0-19L	19	19.67	21.67	5	5	13
PHG1.0-20R	PHG1.0-20L	20	20.71	22.71	5	5	13
PHG1.0-21R	PHG1.0-21L	21	21.74	23.74	5	5	13
PHG1.0-22R	PHG1.0-22L	22	22.78	24.78	5	5	13
PHG1.0-23R	PHG1.0-23L	23	23.81	25.81	5	5	13
PHG1.0-24R	PHG1.0-24L	24	24.85	26.85	6	10	20
PHG1.0-25R	PHG1.0-25L	25	25.88	27.88	6	10	20
PHG1.0-26R	PHG1.0-26L	26	26.92	28.92	6	10	20
PHG1.0-27R	PHG1.0-27L	27	27.95	29.95	6	10	20
PHG1.0-28R	PHG1.0-28L	28	28.99	30.99	6	10	20
PHG1.0-29R	PHG1.0-29L	29	30.02	32.02	6	10	20
PHG1.0-30R	PHG1.0-30L	30	31.06	33.06	6	10	20
PHG1.0-32R	PHG1.0-32L	32	33.13	35.13	6	10	20
PHG1.0-35R	PHG1.0-35L	35	36.23	38.23	6	10	20
PHG1.0-38R	PHG1.0-38L	38	39.34	41.34	8	20	35
PHG1.0-40R	PHG1.0-40L	40	41.41	43.41	8	20	35
PHG1.0-42R	PHG1.0-42L	42	43.48	45.48	8	20	35
PHG1.0-45R	PHG1.0-45L	45	46.59	48.59	8	20	35
PHG1.0-48R	PHG1.0-48L	48	49.69	51.69	8	20	35
PHG1.0-50R	PHG1.0-50L	50	51.76	53.76	10	22	40
PHG1.0-52R	PHG1.0-52L	52	53.83	55.83	10	22	40
PHG1.0-55R	PHG1.0-55L	55	56.94	58.94	10	22	40
PHG1.0-58R	PHG1.0-58L	58	60.05	62.05	10	22	40
PHG1.0-60R	PHG1.0-60L	60	62.12	64.12	10	22	40
PHG1.0-62R	PHG1.0-62L	62	64.19	66.19	10	22	40
PHG1.0-65R	PHG1.0-65L	65	67.29	69.29	10	30	50
PHG1.0-68R	PHG1.0-68L	68	70.40	72.40	10	30	50
PHG1.0-70R	PHG1.0-70L	70	72.47	74.47	10	30	50
PHG1.0-72R	PHG1.0-72L	72	74.54	76.54	10	30	50
PHG1.0-75R	PHG1.0-75L	75	77.65	79.65	10	30	50
PHG1.0-78R	PHG1.0-78L	78	80.75	82.75	10	30	50
PHG1.0-80R	PHG1.0-80L	80	82.82	84.82	10	30	50
PHG1.0-82R	PHG1.0-82L	82	84.89	86.89	12	35	60
PHG1.0-85R	PHG1.0-85L	85	88.00	90.00	12	35	60
PHG1.0-90R	PHG1.0-90L	90	93.17	95.17	12	35	60
PHG1.0-95R	PHG1.0-95L	95	98.35	100.35	12	35	60
PHG1.0-100R	PHG1.0-100L	100	103.53	105.53	12	35	60
PHG1.0-105R	PHG1.0-105L	105	108.70	110.70	14	40	70
PHG1.0-110R	PHG1.0-110L	110	113.88	115.88	14	40	70
PHG1.0-115R	PHG1.0-115L	115	119.06	121.06	14	40	70
PHG1.0-120R	PHG1.0-120L	120	124.23	126.23	14	40	70
PHG1.0-125R	PHG1.0-125L	125	129.41	131.41	14	40	70

PHG-R
PHG-L
1.0m_n

PRECISION GEARS

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 7e DIN 3961/58405
Other Quality Grades available.
See Technical

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 12 = 12mm H7 etc
See Technical

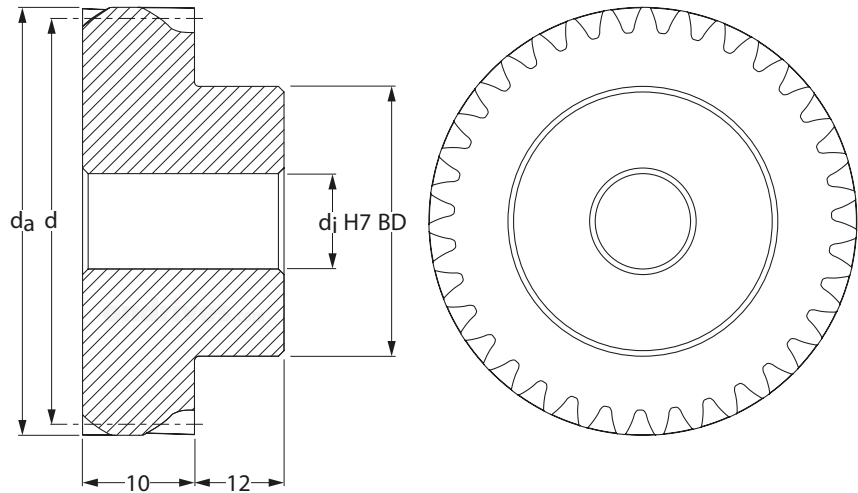
η_z Meshing Efficiency approx. 98%

Part Number Standard 817M40T		Backlash (mm)		Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	j _{t.e} (max)	j _{t.i} (min)			
PHG1.0-15R	PHG1.0-15L	0.131 - 0.055		7.28 x 10 ⁻⁷	0.024	1.40
PHG1.0-16R	PHG1.0-16L	0.131 - 0.055		8.62 x 10 ⁻⁷	0.026	1.49
PHG1.0-17R	PHG1.0-17L	0.131 - 0.055		1.02 x 10 ⁻⁶	0.028	1.58
PHG1.0-18R	PHG1.0-18L	0.132 - 0.054		1.21 x 10 ⁻⁶	0.030	1.68
PHG1.0-19R	PHG1.0-19L	0.132 - 0.054		1.44 x 10 ⁻⁶	0.033	1.77
PHG1.0-20R	PHG1.0-20L	0.132 - 0.054		1.70 x 10 ⁻⁶	0.035	2.37
PHG1.0-21R	PHG1.0-21L	0.132 - 0.054		2.01 x 10 ⁻⁶	0.038	2.49
PHG1.0-22R	PHG1.0-22L	0.132 - 0.054		2.36 x 10 ⁻⁶	0.041	2.61
PHG1.0-23R	PHG1.0-23L	0.132 - 0.054		2.76 x 10 ⁻⁶	0.044	2.72
PHG1.0-24R	PHG1.0-24L	0.132 - 0.054		4.42 x 10 ⁻⁶	0.062	2.84
PHG1.0-25R	PHG1.0-25L	0.132 - 0.054		4.94 x 10 ⁻⁶	0.066	2.96
PHG1.0-26R	PHG1.0-26L	0.132 - 0.054		5.52 x 10 ⁻⁶	0.069	3.88
PHG1.0-27R	PHG1.0-27L	0.132 - 0.054		6.18 x 10 ⁻⁶	0.072	4.02
PHG1.0-28R	PHG1.0-28L	0.132 - 0.054		6.91 x 10 ⁻⁶	0.076	4.17
PHG1.0-29R	PHG1.0-29L	0.134 - 0.053		7.72 x 10 ⁻⁶	0.080	4.32
PHG1.0-30R	PHG1.0-30L	0.134 - 0.053		8.62 x 10 ⁻⁶	0.084	5.10
PHG1.0-32R	PHG1.0-32L	0.134 - 0.053		1.07 x 10 ⁻⁵	0.092	5.44
PHG1.0-35R	PHG1.0-35L	0.134 - 0.053		1.47 x 10 ⁻⁵	0.105	5.95
PHG1.0-38R	PHG1.0-38L	0.134 - 0.053		3.22 x 10 ⁻⁵	0.176	6.46
PHG1.0-40R	PHG1.0-40L	0.134 - 0.053		3.63 x 10 ⁻⁵	0.187	8.70
PHG1.0-42R	PHG1.0-42L	0.134 - 0.053		4.12 x 10 ⁻⁵	0.197	9.13
PHG1.0-45R	PHG1.0-45L	0.134 - 0.053		4.98 x 10 ⁻⁵	0.215	9.78
PHG1.0-48R	PHG1.0-48L	0.134 - 0.053		6.04 x 10 ⁻⁵	0.233	10.44
PHG1.0-50R	PHG1.0-50L	0.177 - 0.072		7.84 x 10 ⁻⁵	0.269	13.60
PHG1.0-52R	PHG1.0-52L	0.177 - 0.072		8.77 x 10 ⁻⁵	0.282	14.15
PHG1.0-55R	PHG1.0-55L	0.177 - 0.072		1.04 x 10 ⁻⁴	0.303	14.96
PHG1.0-58R	PHG1.0-58L	0.177 - 0.072		1.23 x 10 ⁻⁴	0.326	15.78
PHG1.0-60R	PHG1.0-60L	0.177 - 0.072		1.37 x 10 ⁻⁴	0.341	18.59
PHG1.0-62R	PHG1.0-62L	0.177 - 0.072		1.53 x 10 ⁻⁴	0.357	19.21
PHG1.0-65R	PHG1.0-65L	0.177 - 0.072		2.14 x 10 ⁻⁴	0.449	20.14
PHG1.0-68R	PHG1.0-68L	0.177 - 0.072		2.45 x 10 ⁻⁴	0.475	21.07
PHG1.0-70R	PHG1.0-70L	0.177 - 0.072		2.68 x 10 ⁻⁴	0.493	21.69
PHG1.0-72R	PHG1.0-72L	0.177 - 0.072		2.94 x 10 ⁻⁴	0.512	22.31
PHG1.0-75R	PHG1.0-75L	0.177 - 0.072		3.36 x 10 ⁻⁴	0.541	23.24
PHG1.0-78R	PHG1.0-78L	0.179 - 0.070		3.83 x 10 ⁻⁴	0.571	24.17
PHG1.0-80R	PHG1.0-80L	0.179 - 0.070		4.17 x 10 ⁻⁴	0.592	32.03
PHG1.0-82R	PHG1.0-82L	0.179 - 0.070		5.17 x 10 ⁻⁴	0.689	32.83
PHG1.0-85R	PHG1.0-85L	0.179 - 0.070		5.78 x 10 ⁻⁴	0.722	34.03
PHG1.0-90R	PHG1.0-90L	0.179 - 0.070		6.96 x 10 ⁻⁴	0.780	36.03
PHG1.0-95R	PHG1.0-95L	0.179 - 0.070		8.36 x 10 ⁻⁴	0.840	38.03
PHG1.0-100R	PHG1.0-100L	0.179 - 0.070		9.99 x 10 ⁻⁴	0.905	47.15
PHG1.0-105R	PHG1.0-105L	0.179 - 0.070		1.29 x 10 ⁻³	1.061	49.50
PHG1.0-110R	PHG1.0-110L	0.179 - 0.070		1.51 x 10 ⁻³	1.132	51.86
PHG1.0-115R	PHG1.0-115L	0.179 - 0.070		1.76 x 10 ⁻³	1.206	54.22
PHG1.0-120R	PHG1.0-120L	0.181 - 0.068		2.05 x 10 ⁻³	1.284	56.57
PHG1.0-125R	PHG1.0-125L	0.235 - 0.101		2.37 x 10 ⁻³	1.365	58.93

PHG-RH
PHG-LH
1.0m_n

PRECISION GEARS

1.0 Module 15° Parallel Helical Gear α 20° PA
Hardened Gears - Quality Grade 7e DIN 3961/3967 (AGMA Q10)



DIN 3967 Tooth Thickness tol.

Part Number 805M20 [#] Case Hardened		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>
RH	LH						
PHG1.0-15RH	PHG1.0-15LH	15	15.53	17.53	5	5	13
PHG1.0-16RH	PHG1.0-16LH	16	16.56	18.56	5	5	13
PHG1.0-17RH	PHG1.0-17LH	17	17.60	19.60	5	5	13
PHG1.0-18RH	PHG1.0-18LH	18	18.63	20.63	5	5	13
PHG1.0-19RH	PHG1.0-19LH	19	19.67	21.67	5	5	13
PHG1.0-20RH	PHG1.0-20LH	20	20.71	22.71	5	5	13
PHG1.0-21RH	PHG1.0-21LH	21	21.74	23.74	5	5	13
PHG1.0-22RH	PHG1.0-22LH	22	22.78	24.78	5	5	13
PHG1.0-23RH	PHG1.0-23LH	23	23.81	25.81	5	5	13
PHG1.0-24RH	PHG1.0-24LH	24	24.85	26.85	6	10	20
PHG1.0-25RH	PHG1.0-25LH	25	25.88	27.88	6	10	20
PHG1.0-26RH	PHG1.0-26LH	26	26.92	28.92	6	10	20
PHG1.0-27RH	PHG1.0-27LH	27	27.95	29.95	6	10	20
PHG1.0-28RH	PHG1.0-28LH	28	28.99	30.99	6	10	20
PHG1.0-29RH	PHG1.0-29LH	29	30.02	32.02	6	10	20
PHG1.0-30RH	PHG1.0-30LH	30	31.06	33.06	6	10	20
PHG1.0-32RH	PHG1.0-32LH	32	33.13	35.13	6	10	20
PHG1.0-35RH	PHG1.0-35LH	35	36.23	38.23	6	10	20
PHG1.0-38RH	PHG1.0-38LH	38	39.34	41.34	8	20	35
PHG1.0-40RH	PHG1.0-40LH	40	41.41	43.41	8	20	35
PHG1.0-42RH	PHG1.0-42LH	42	43.48	45.48	8	20	35
PHG1.0-45RH	PHG1.0-45LH	45	46.59	48.59	8	20	35
PHG1.0-48RH	PHG1.0-48LH	48	49.69	51.69	8	20	35
PHG1.0-50RH	PHG1.0-50LH	50	51.76	53.76	10	22	40
PHG1.0-52RH	PHG1.0-52LH	52	53.83	55.83	10	22	40
PHG1.0-55RH	PHG1.0-55LH	55	56.94	58.94	10	22	40
PHG1.0-58RH	PHG1.0-58LH	58	60.05	62.05	10	22	40
PHG1.0-60RH	PHG1.0-60LH	60	62.12	64.12	10	22	40
PHG1.0-62RH	PHG1.0-62LH	62	64.19	66.19	10	22	40
PHG1.0-65RH	PHG1.0-65LH	65	67.29	69.29	10	30	50
PHG1.0-68RH	PHG1.0-68LH	68	70.40	72.40	10	30	50
PHG1.0-70RH	PHG1.0-70LH	70	72.47	74.47	10	30	50
PHG1.0-72RH	PHG1.0-72LH	72	74.54	76.54	10	30	50
PHG1.0-75RH	PHG1.0-75LH	75	77.65	79.65	10	30	50
PHG1.0-78RH	PHG1.0-78LH	78	80.75	82.75	10	30	50
PHG1.0-80RH	PHG1.0-80LH	80	82.82	84.82	10	30	50
PHG1.0-82RH	PHG1.0-82LH	82	84.89	86.89	12	35	60
PHG1.0-85RH	PHG1.0-85LH	85	88.00	90.00	12	35	60
PHG1.0-90RH	PHG1.0-90LH	90	93.17	95.17	12	35	60
PHG1.0-95RH	PHG1.0-95LH	95	98.35	100.35	12	35	60
PHG1.0-100RH	PHG1.0-100LH	100	103.53	105.53	12	35	60
PHG1.0-105RH	PHG1.0-105LH	105	108.70	110.70	14	40	70
PHG1.0-110RH	PHG1.0-110LH	110	113.88	115.88	14	40	70
PHG1.0-115RH	PHG1.0-115LH	115	119.06	121.06	14	40	70
PHG1.0-120RH	PHG1.0-120LH	120	124.23	126.23	14	40	70
PHG1.0-125RH	PHG1.0-125LH	125	129.41	131.41	14	40	70

PHG-RH
PHG-LH
1.0m_n

PRECISION GEARS

1.0 Module 15° Parallel Helical Gear α 20° PA

Hardened Gears - Quality Grade 7e 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 7e DIN 3961/58405
Other Quality Grades available.
See Technical

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 12 = 12mm H7 etc
See Technical

Quality Grades and Tolerances stated prior to heat treatment processes.
η_z Meshing Efficiency approx. 98%

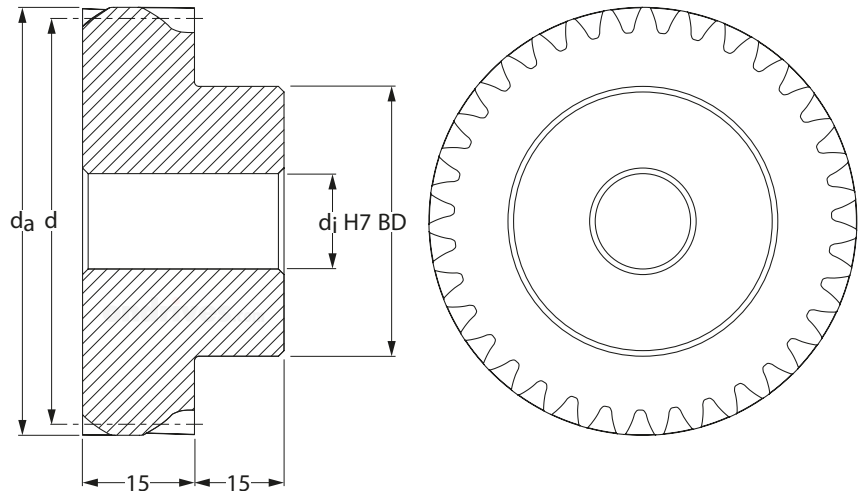
Part Number 805M20# Case Hardened		Backlash (mm)		Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	j _{t.e} (max)	j _{t.i} (min)			
PHG1.0-15RH	PHG1.0-15LH	0.131 - 0.055		7.28 x 10 ⁻⁷	0.024	5.12
PHG1.0-16RH	PHG1.0-16LH	0.131 - 0.055		8.62 x 10 ⁻⁷	0.026	5.46
PHG1.0-17RH	PHG1.0-17LH	0.131 - 0.055		1.02 x 10 ⁻⁶	0.028	5.80
PHG1.0-18RH	PHG1.0-18LH	0.132 - 0.054		1.21 x 10 ⁻⁶	0.030	6.14
PHG1.0-19RH	PHG1.0-19LH	0.132 - 0.054		1.44 x 10 ⁻⁶	0.033	6.48
PHG1.0-20RH	PHG1.0-20LH	0.132 - 0.054		1.70 x 10 ⁻⁶	0.035	8.69
PHG1.0-21RH	PHG1.0-21LH	0.132 - 0.054		2.01 x 10 ⁻⁶	0.038	9.12
PHG1.0-22RH	PHG1.0-22LH	0.132 - 0.054		2.36 x 10 ⁻⁶	0.041	9.56
PHG1.0-23RH	PHG1.0-23LH	0.132 - 0.054		2.76 x 10 ⁻⁶	0.044	9.99
PHG1.0-24RH	PHG1.0-24LH	0.132 - 0.054		4.42 x 10 ⁻⁶	0.062	10.43
PHG1.0-25RH	PHG1.0-25LH	0.132 - 0.054		4.94 x 10 ⁻⁶	0.066	10.86
PHG1.0-26RH	PHG1.0-26LH	0.132 - 0.054		5.52 x 10 ⁻⁶	0.069	14.21
PHG1.0-27RH	PHG1.0-27LH	0.132 - 0.054		6.18 x 10 ⁻⁶	0.072	14.76
PHG1.0-28RH	PHG1.0-28LH	0.132 - 0.054		6.91 x 10 ⁻⁶	0.076	15.30
PHG1.0-29RH	PHG1.0-29LH	0.134 - 0.053		7.72 x 10 ⁻⁶	0.080	15.85
PHG1.0-30RH	PHG1.0-30LH	0.134 - 0.053		8.62 x 10 ⁻⁶	0.084	16.39
PHG1.0-32RH	PHG1.0-32LH	0.134 - 0.053		1.07 x 10 ⁻⁵	0.092	17.48
PHG1.0-35RH	PHG1.0-35LH	0.134 - 0.053		1.47 x 10 ⁻⁵	0.105	19.12
PHG1.0-38RH	PHG1.0-38LH	0.134 - 0.053		3.22 x 10 ⁻⁵	0.176	20.76
PHG1.0-40RH	PHG1.0-40LH	0.134 - 0.053		3.63 x 10 ⁻⁵	0.187	24.31
PHG1.0-42RH	PHG1.0-42LH	0.134 - 0.053		4.12 x 10 ⁻⁵	0.197	25.52
PHG1.0-45RH	PHG1.0-45LH	0.134 - 0.053		4.98 x 10 ⁻⁵	0.215	27.35
PHG1.0-48RH	PHG1.0-48LH	0.134 - 0.053		6.04 x 10 ⁻⁵	0.233	29.17
PHG1.0-50RH	PHG1.0-50LH	0.177 - 0.072		7.84 x 10 ⁻⁵	0.269	32.97
PHG1.0-52RH	PHG1.0-52LH	0.177 - 0.072		8.77 x 10 ⁻⁵	0.282	34.29
PHG1.0-55RH	PHG1.0-55LH	0.177 - 0.072		1.04 x 10 ⁻⁴	0.303	36.27
PHG1.0-58RH	PHG1.0-58LH	0.177 - 0.072		1.23 x 10 ⁻⁴	0.326	38.25
PHG1.0-60RH	PHG1.0-60LH	0.177 - 0.072		1.37 x 10 ⁻⁴	0.341	41.20
PHG1.0-62RH	PHG1.0-62LH	0.177 - 0.072		1.53 x 10 ⁻⁴	0.357	42.57
PHG1.0-65RH	PHG1.0-65LH	0.177 - 0.072		2.14 x 10 ⁻⁴	0.449	44.63
PHG1.0-68RH	PHG1.0-68LH	0.177 - 0.072		2.45 x 10 ⁻⁴	0.475	46.69
PHG1.0-70RH	PHG1.0-70LH	0.177 - 0.072		2.68 x 10 ⁻⁴	0.493	48.07
PHG1.0-72RH	PHG1.0-72LH	0.177 - 0.072		2.94 x 10 ⁻⁴	0.512	49.44
PHG1.0-75RH	PHG1.0-75LH	0.177 - 0.072		3.36 x 10 ⁻⁴	0.541	51.50
PHG1.0-78RH	PHG1.0-78LH	0.179 - 0.070		3.83 x 10 ⁻⁴	0.571	53.56
PHG1.0-80RH	PHG1.0-80LH	0.179 - 0.070		4.17 x 10 ⁻⁴	0.592	57.60
PHG1.0-82RH	PHG1.0-82LH	0.179 - 0.070		5.17 x 10 ⁻⁴	0.689	59.04
PHG1.0-85RH	PHG1.0-85LH	0.179 - 0.070		5.78 x 10 ⁻⁴	0.722	61.20
PHG1.0-90RH	PHG1.0-90LH	0.179 - 0.070		6.96 x 10 ⁻⁴	0.780	64.80
PHG1.0-95RH	PHG1.0-95LH	0.179 - 0.070		8.36 x 10 ⁻⁴	0.840	68.40
PHG1.0-100RH	PHG1.0-100LH	0.179 - 0.070		9.99 x 10 ⁻⁴	0.905	73.67
PHG1.0-105RH	PHG1.0-105LH	0.179 - 0.070		1.29 x 10 ⁻³	1.061	77.35
PHG1.0-110RH	PHG1.0-110LH	0.179 - 0.070		1.51 x 10 ⁻³	1.132	81.03
PHG1.0-115RH	PHG1.0-115LH	0.179 - 0.070		1.76 x 10 ⁻³	1.206	84.71
PHG1.0-120RH	PHG1.0-120LH	0.181 - 0.068		2.05 x 10 ⁻³	1.284	88.40
PHG1.0-125RH	PHG1.0-125LH	0.235 - 0.101		2.37 x 10 ⁻³	1.365	92.08

PHG-R
PHG-L
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 Standard 817M40T		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>
RH	LH						
PHG1.5-15R	PHG1.5-15L	15	23.29	26.29	6	10	19
PHG1.5-16R	PHG1.5-16L	16	24.85	27.85	6	10	19
PHG1.5-17R	PHG1.5-17L	17	26.40	29.40	6	10	19
PHG1.5-18R	PHG1.5-18L	18	27.95	30.95	6	10	19
PHG1.5-19R	PHG1.5-19L	19	29.51	32.51	6	10	19
PHG1.5-20R	PHG1.5-20L	20	31.06	34.06	6	10	19
PHG1.5-21R	PHG1.5-21L	21	32.61	35.61	6	10	19
PHG1.5-22R	PHG1.5-22L	22	34.16	37.16	8	16	28
PHG1.5-23R	PHG1.5-23L	23	35.72	38.72	8	16	28
PHG1.5-24R	PHG1.5-24L	24	37.27	40.27	8	16	28
PHG1.5-25R	PHG1.5-25L	25	38.82	41.82	8	16	28
PHG1.5-26R	PHG1.5-26L	26	40.38	43.38	8	16	28
PHG1.5-27R	PHG1.5-27L	27	41.93	44.93	8	16	28
PHG1.5-28R	PHG1.5-28L	28	43.48	46.48	8	16	28
PHG1.5-29R	PHG1.5-29L	29	45.03	48.03	10	22	40
PHG1.5-30R	PHG1.5-30L	30	46.59	49.59	10	22	40
PHG1.5-32R	PHG1.5-32L	32	49.69	52.69	10	22	40
PHG1.5-35R	PHG1.5-35L	35	54.35	57.35	10	22	40
PHG1.5-38R	PHG1.5-38L	38	59.01	62.01	12	30	50
PHG1.5-40R	PHG1.5-40L	40	62.12	65.12	12	30	50
PHG1.5-42R	PHG1.5-42L	42	65.22	68.22	12	30	50
PHG1.5-45R	PHG1.5-45L	45	69.88	72.88	12	30	50
PHG1.5-48R	PHG1.5-48L	48	74.54	77.54	12	30	50
PHG1.5-50R	PHG1.5-50L	50	77.65	80.65	14	35	65
PHG1.5-52R	PHG1.5-52L	52	80.75	83.75	14	35	65
PHG1.5-55R	PHG1.5-55L	55	85.41	88.41	14	35	65
PHG1.5-58R	PHG1.5-58L	58	90.07	93.07	14	35	65
PHG1.5-60R	PHG1.5-60L	60	93.17	96.17	14	35	65
PHG1.5-62R	PHG1.5-62L	62	96.28	99.28	14	35	65
PHG1.5-65R	PHG1.5-65L	65	100.94	103.94	16	40	85
PHG1.5-68R	PHG1.5-68L	68	105.60	108.60	16	40	85
PHG1.5-70R	PHG1.5-70L	70	108.70	111.70	16	40	85
PHG1.5-72R	PHG1.5-72L	72	111.81	114.81	16	40	85
PHG1.5-75R	PHG1.5-75L	75	116.47	119.47	16	40	85
PHG1.5-78R	PHG1.5-78L	78	121.13	124.13	16	40	85

PHG-R
PHG-L
1.5m_n

PRECISION GEARS

1.5 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG 1.5 50 R**

Modified Part **PHG 1.5 50 L H 25 K T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 25 = 25mm H7 etc
See Technical

η_z Meshing Efficiency approx. 98%

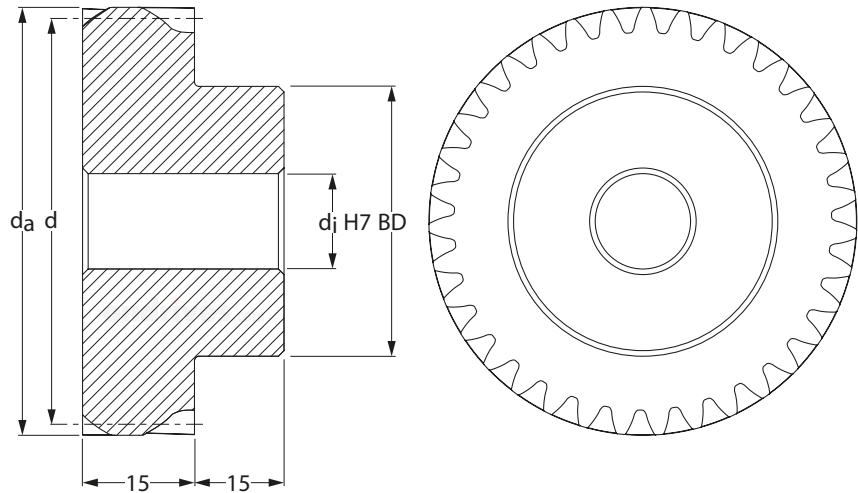
Part Number Standard 817M40T		Backlash (mm)	Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	<i>j_{t.e}</i> (max) <i>j_{t.i}</i> (min)			
PHG1.5-15R	PHG1.5-15L	0.132 - 0.054	5.08 x 10 ⁻⁶	0.076	4.35
PHG1.5-16R	PHG1.5-16L	0.132 - 0.054	6.10 x 10 ⁻⁶	0.083	4.63
PHG1.5-17R	PHG1.5-17L	0.132 - 0.054	7.32 x 10 ⁻⁶	0.090	4.92
PHG1.5-18R	PHG1.5-18L	0.132 - 0.054	8.77 x 10 ⁻⁶	0.098	5.21
PHG1.5-19R	PHG1.5-19L	0.132 - 0.054	1.05 x 10 ⁻⁵	0.106	5.50
PHG1.5-20R	PHG1.5-20L	0.134 - 0.053	1.25 x 10 ⁻⁵	0.115	7.37
PHG1.5-21R	PHG1.5-21L	0.134 - 0.053	1.48 x 10 ⁻⁵	0.124	7.74
PHG1.5-22R	PHG1.5-22L	0.134 - 0.053	2.30 x 10 ⁻⁵	0.167	8.11
PHG1.5-23R	PHG1.5-23L	0.134 - 0.053	2.60 x 10 ⁻⁵	0.177	8.48
PHG1.5-24R	PHG1.5-24L	0.134 - 0.053	2.95 x 10 ⁻⁵	0.188	8.85
PHG1.5-25R	PHG1.5-25L	0.134 - 0.053	3.34 x 10 ⁻⁵	0.198	9.22
PHG1.5-26R	PHG1.5-26L	0.134 - 0.053	3.79 x 10 ⁻⁵	0.210	12.06
PHG1.5-27R	PHG1.5-27L	0.134 - 0.053	4.28 x 10 ⁻⁵	0.221	12.53
PHG1.5-28R	PHG1.5-28L	0.134 - 0.053	4.84 x 10 ⁻⁵	0.234	12.99
PHG1.5-29R	PHG1.5-29L	0.134 - 0.053	7.69 x 10 ⁻⁵	0.315	13.45
PHG1.5-30R	PHG1.5-30L	0.134 - 0.053	8.38 x 10 ⁻⁵	0.328	15.86
PHG1.5-32R	PHG1.5-32L	0.134 - 0.053	9.97 x 10 ⁻⁵	0.355	16.92
PHG1.5-35R	PHG1.5-35L	0.177 - 0.072	1.30 x 10 ⁻⁴	0.400	18.51
PHG1.5-38R	PHG1.5-38L	0.177 - 0.072	2.11 x 10 ⁻⁴	0.524	20.09
PHG1.5-40R	PHG1.5-40L	0.177 - 0.072	2.43 x 10 ⁻⁴	0.558	27.06
PHG1.5-42R	PHG1.5-42L	0.177 - 0.072	2.80 x 10 ⁻⁴	0.595	28.42
PHG1.5-45R	PHG1.5-45L	0.177 - 0.072	3.45 x 10 ⁻⁴	0.652	30.45
PHG1.5-48R	PHG1.5-48L	0.177 - 0.072	4.26 x 10 ⁻⁴	0.714	32.48
PHG1.5-50R	PHG1.5-50L	0.177 - 0.072	6.22 x 10 ⁻⁴	0.908	42.34
PHG1.5-52R	PHG1.5-52L	0.179 - 0.070	6.93 x 10 ⁻⁴	0.953	44.03
PHG1.5-55R	PHG1.5-55L	0.179 - 0.070	8.16 x 10 ⁻⁴	1.024	46.57
PHG1.5-58R	PHG1.5-58L	0.179 - 0.070	9.60 x 10 ⁻⁴	1.100	49.11
PHG1.5-60R	PHG1.5-60L	0.179 - 0.070	1.07 x 10 ⁻³	1.152	57.86
PHG1.5-62R	PHG1.5-62L	0.179 - 0.070	1.19 x 10 ⁻³	1.206	59.78
PHG1.5-65R	PHG1.5-65L	0.179 - 0.070	1.79 x 10 ⁻³	1.557	62.68
PHG1.5-68R	PHG1.5-68L	0.179 - 0.070	2.03 x 10 ⁻³	1.646	65.57
PHG1.5-70R	PHG1.5-70L	0.179 - 0.070	2.20 x 10 ⁻³	1.707	67.50
PHG1.5-72R	PHG1.5-72L	0.179 - 0.070	2.39 x 10 ⁻³	1.770	69.43
PHG1.5-75R	PHG1.5-75L	0.179 - 0.070	2.71 x 10 ⁻³	1.868	72.32
PHG1.5-78R	PHG1.5-78L	0.181 - 0.068	3.07 x 10 ⁻³	1.970	75.21

PHG-RH
PHG-LH
1.5m_n

PRECISION GEARS

1.5 Module 15° Parallel Helical Gear α 20° PA

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



DIN 3967 Tooth Thickness tol.

Part Number 805M20 [#] Case Hardened		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>
RH	LH						
PHG1.5-15RH	PHG1.5-15LH	15	23.29	26.29	6	10	19
PHG1.5-16RH	PHG1.5-16LH	16	24.85	27.85	6	10	19
PHG1.5-17RH	PHG1.5-17LH	17	26.40	29.40	6	10	19
PHG1.5-18RH	PHG1.5-18LH	18	27.95	30.95	6	10	19
PHG1.5-19RH	PHG1.5-19LH	19	29.51	32.51	6	10	19
PHG1.5-20RH	PHG1.5-20LH	20	31.06	34.06	6	10	19
PHG1.5-21RH	PHG1.5-21LH	21	32.61	35.61	6	10	19
PHG1.5-22RH	PHG1.5-22LH	22	34.16	37.16	8	16	28
PHG1.5-23RH	PHG1.5-23LH	23	35.72	38.72	8	16	28
PHG1.5-24RH	PHG1.5-24LH	24	37.27	40.27	8	16	28
PHG1.5-25RH	PHG1.5-25LH	25	38.82	41.82	8	16	28
PHG1.5-26RH	PHG1.5-26LH	26	40.38	43.38	8	16	28
PHG1.5-27RH	PHG1.5-27LH	27	41.93	44.93	8	16	28
PHG1.5-28RH	PHG1.5-28LH	28	43.48	46.48	8	16	28
PHG1.5-29RH	PHG1.5-29LH	29	45.03	48.03	10	22	40
PHG1.5-30RH	PHG1.5-30LH	30	46.59	49.59	10	22	40
PHG1.5-32RH	PHG1.5-32LH	32	49.69	52.69	10	22	40
PHG1.5-35RH	PHG1.5-35LH	35	54.35	57.35	10	22	40
PHG1.5-38RH	PHG1.5-38LH	38	59.01	62.01	12	30	50
PHG1.5-40RH	PHG1.5-40LH	40	62.12	65.12	12	30	50
PHG1.5-42RH	PHG1.5-42LH	42	65.22	68.22	12	30	50
PHG1.5-45RH	PHG1.5-45LH	45	69.88	72.88	12	30	50
PHG1.5-48RH	PHG1.5-48LH	48	74.54	77.54	12	30	50
PHG1.5-50RH	PHG1.5-50LH	50	77.65	80.65	14	35	65
PHG1.5-52RH	PHG1.5-52LH	52	80.75	83.75	14	35	65
PHG1.5-55RH	PHG1.5-55LH	55	85.41	88.41	14	35	65
PHG1.5-58RH	PHG1.5-58LH	58	90.07	93.07	14	35	65
PHG1.5-60RH	PHG1.5-60LH	60	93.17	96.17	14	35	65
PHG1.5-62RH	PHG1.5-62LH	62	96.28	99.28	14	35	65
PHG1.5-65RH	PHG1.5-65LH	65	100.94	103.94	16	40	85
PHG1.5-68RH	PHG1.5-68LH	68	105.60	108.60	16	40	85
PHG1.5-70RH	PHG1.5-70LH	70	108.70	111.70	16	40	85
PHG1.5-72RH	PHG1.5-72LH	72	111.81	114.81	16	40	85
PHG1.5-75RH	PHG1.5-75LH	75	116.47	119.47	16	40	85
PHG1.5-78RH	PHG1.5-78LH	78	121.13	124.13	16	40	85

PHG-RH
PHG-LH
1.5m_n

PRECISION GEARS

1.5 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG 1.5 50 R**

Modified Part **PHG 1.5 50 L H 25 K T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 25 = 25mm H7 etc
See Technical

Quality Grades and Tolerances stated prior to heat treatment processes.
η_z Meshing Efficiency approx. 98%

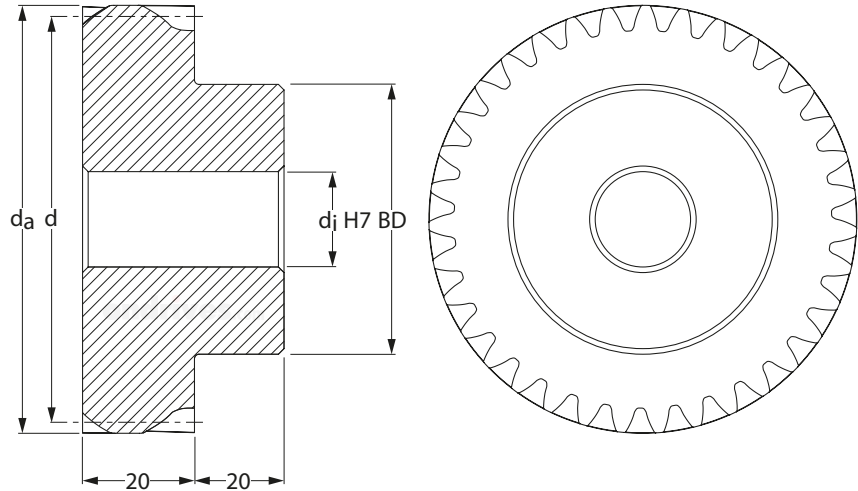
Part Number 805M20# Case Hardened		Backlash (mm)	Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	j _{t,e} (max) j _{t,i} (min)			
PHG1.5-15RH	PHG1.5-15LH	0.132 - 0.054	5.08 x 10 ⁻⁶	0.076	15.93
PHG1.5-16RH	PHG1.5-16LH	0.132 - 0.054	6.10 x 10 ⁻⁶	0.083	16.99
PHG1.5-17RH	PHG1.5-17LH	0.132 - 0.054	7.32 x 10 ⁻⁶	0.090	18.06
PHG1.5-18RH	PHG1.5-18LH	0.132 - 0.054	8.77 x 10 ⁻⁶	0.098	19.12
PHG1.5-19RH	PHG1.5-19LH	0.132 - 0.054	1.05 x 10 ⁻⁵	0.106	20.18
PHG1.5-20RH	PHG1.5-20LH	0.134 - 0.053	1.25 x 10 ⁻⁵	0.115	27.04
PHG1.5-21RH	PHG1.5-21LH	0.134 - 0.053	1.48 x 10 ⁻⁵	0.124	28.39
PHG1.5-22RH	PHG1.5-22LH	0.134 - 0.053	2.30 x 10 ⁻⁵	0.167	29.74
PHG1.5-23RH	PHG1.5-23LH	0.134 - 0.053	2.60 x 10 ⁻⁵	0.177	31.09
PHG1.5-24RH	PHG1.5-24LH	0.134 - 0.053	2.95 x 10 ⁻⁵	0.188	32.44
PHG1.5-25RH	PHG1.5-25LH	0.134 - 0.053	3.34 x 10 ⁻⁵	0.198	33.80
PHG1.5-26RH	PHG1.5-26LH	0.134 - 0.053	3.79 x 10 ⁻⁵	0.210	44.23
PHG1.5-27RH	PHG1.5-27LH	0.134 - 0.053	4.28 x 10 ⁻⁵	0.221	45.93
PHG1.5-28RH	PHG1.5-28LH	0.134 - 0.053	4.84 x 10 ⁻⁵	0.234	47.63
PHG1.5-29RH	PHG1.5-29LH	0.134 - 0.053	7.69 x 10 ⁻⁵	0.315	49.33
PHG1.5-30RH	PHG1.5-30LH	0.134 - 0.053	8.38 x 10 ⁻⁵	0.328	55.32
PHG1.5-32RH	PHG1.5-32LH	0.134 - 0.053	9.97 x 10 ⁻⁵	0.355	59.01
PHG1.5-35RH	PHG1.5-35LH	0.177 - 0.072	1.30 x 10 ⁻⁴	0.400	64.54
PHG1.5-38RH	PHG1.5-38LH	0.177 - 0.072	2.11 x 10 ⁻⁴	0.524	70.07
PHG1.5-40RH	PHG1.5-40LH	0.177 - 0.072	2.43 x 10 ⁻⁴	0.558	82.04
PHG1.5-42RH	PHG1.5-42LH	0.177 - 0.072	2.80 x 10 ⁻⁴	0.595	86.15
PHG1.5-45RH	PHG1.5-45LH	0.177 - 0.072	3.45 x 10 ⁻⁴	0.652	92.30
PHG1.5-48RH	PHG1.5-48LH	0.177 - 0.072	4.26 x 10 ⁻⁴	0.714	98.45
PHG1.5-50RH	PHG1.5-50LH	0.177 - 0.072	6.22 x 10 ⁻⁴	0.908	111.29
PHG1.5-52RH	PHG1.5-52LH	0.179 - 0.070	6.93 x 10 ⁻⁴	0.953	115.74
PHG1.5-55RH	PHG1.5-55LH	0.179 - 0.070	8.16 x 10 ⁻⁴	1.024	122.42
PHG1.5-58RH	PHG1.5-58LH	0.179 - 0.070	9.60 x 10 ⁻⁴	1.100	129.09
PHG1.5-60RH	PHG1.5-60LH	0.179 - 0.070	1.07 x 10 ⁻³	1.152	139.05
PHG1.5-62RH	PHG1.5-62LH	0.179 - 0.070	1.19 x 10 ⁻³	1.206	143.68
PHG1.5-65RH	PHG1.5-65LH	0.179 - 0.070	1.79 x 10 ⁻³	1.557	150.64
PHG1.5-68RH	PHG1.5-68LH	0.179 - 0.070	2.03 x 10 ⁻³	1.646	157.59
PHG1.5-70RH	PHG1.5-70LH	0.179 - 0.070	2.20 x 10 ⁻³	1.707	162.22
PHG1.5-72RH	PHG1.5-72LH	0.179 - 0.070	2.39 x 10 ⁻³	1.770	166.86
PHG1.5-75RH	PHG1.5-75LH	0.179 - 0.070	2.71 x 10 ⁻³	1.868	173.81
PHG1.5-78RH	PHG1.5-78LH	0.181 - 0.068	3.07 x 10 ⁻³	1.970	180.76

PHG-R
PHG-L
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 Standard 817M40T		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>
RH	LH						
PHG2.0-15R	PHG2.0-15L	15	31.06	35.06	10	12	25
PHG2.0-16R	PHG2.0-16L	16	33.13	37.13	10	12	25
PHG2.0-17R	PHG2.0-17L	17	35.20	39.20	10	12	25
PHG2.0-18R	PHG2.0-18L	18	37.27	41.27	10	12	25
PHG2.0-19R	PHG2.0-19L	19	39.34	43.34	10	12	25
PHG2.0-20R	PHG2.0-20L	20	41.41	45.41	10	12	25
PHG2.0-21R	PHG2.0-21L	21	43.48	47.48	12	20	35
PHG2.0-22R	PHG2.0-22L	22	45.55	49.55	12	20	35
PHG2.0-23R	PHG2.0-23L	23	47.62	51.62	12	20	35
PHG2.0-24R	PHG2.0-24L	24	49.69	53.69	12	20	35
PHG2.0-25R	PHG2.0-25L	25	51.76	55.76	12	20	35
PHG2.0-26R	PHG2.0-26L	26	53.83	57.83	12	20	35
PHG2.0-27R	PHG2.0-27L	27	55.90	59.90	12	20	35
PHG2.0-28R	PHG2.0-28L	28	57.98	61.98	14	25	45
PHG2.0-29R	PHG2.0-29L	29	60.05	64.05	14	25	45
PHG2.0-30R	PHG2.0-30L	30	62.12	66.12	14	25	45
PHG2.0-32R	PHG2.0-32L	32	66.26	70.26	14	25	45
PHG2.0-35R	PHG2.0-35L	35	72.47	76.47	14	25	45
PHG2.0-38R	PHG2.0-38L	38	78.68	82.68	16	30	50
PHG2.0-40R	PHG2.0-40L	40	82.82	86.82	16	30	50
PHG2.0-42R	PHG2.0-42L	42	86.96	90.96	16	30	50
PHG2.0-45R	PHG2.0-45L	45	93.17	97.17	16	30	50
PHG2.0-48R	PHG2.0-48L	48	99.39	103.39	16	35	60
PHG2.0-50R	PHG2.0-50L	50	103.53	107.53	16	35	60
PHG2.0-52R	PHG2.0-52L	52	107.67	111.67	16	35	60
PHG2.0-55R	PHG2.0-55L	55	113.88	117.88	16	35	60
PHG2.0-58R	PHG2.0-58L	58	120.09	124.09	20	40	70
PHG2.0-60R	PHG2.0-60L	60	124.23	128.23	20	40	70
PHG2.0-62R	PHG2.0-62L	62	128.37	132.37	20	40	70

PHG-R
PHG-L
2.0m_n

PRECISION GEARS

2.0 Module 15° Parallel Helical Gear α 20° PA

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

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

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

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 20 = 20mm H7 etc
See Technical

η_z Meshing Efficiency approx. 98%

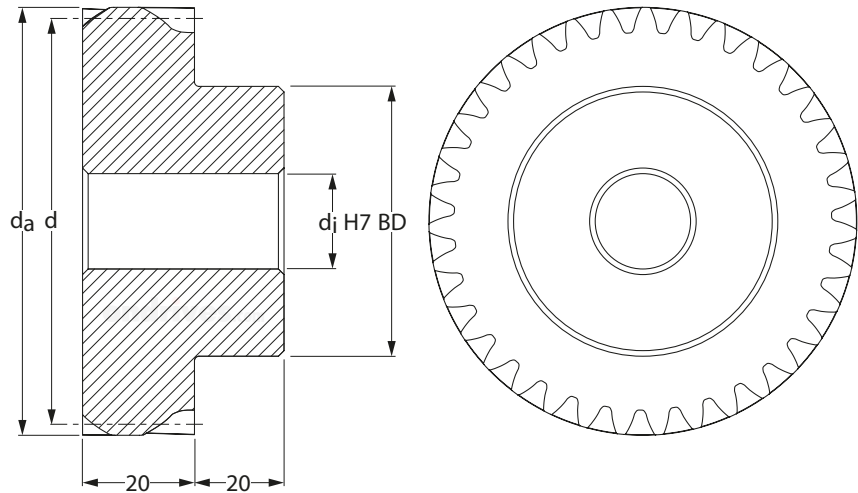
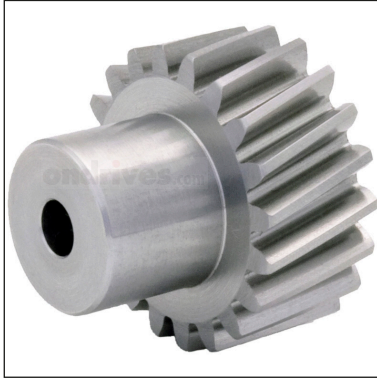
Part Number Standard 817M40T		Backlash (mm) <i>j_{t.e} (max) j_{t.i} (min)</i>	Inertia <i>kgm²</i>	Mass <i>kg</i>	Torque <i>T₂ Nm</i> <i>n₂ 100 Rpm</i>
RH	LH				
PHG2.0-15R	PHG2.0-15L	0.134 - 0.053	2.09 x 10 ⁻⁵	0.170	9.72
PHG2.0-16R	PHG2.0-16L	0.134 - 0.053	2.52 x 10 ⁻⁵	0.186	10.37
PHG2.0-17R	PHG2.0-17L	0.134 - 0.053	3.03 x 10 ⁻⁵	0.203	11.02
PHG2.0-18R	PHG2.0-18L	0.134 - 0.053	3.64 x 10 ⁻⁵	0.222	11.67
PHG2.0-19R	PHG2.0-19L	0.134 - 0.053	4.36 x 10 ⁻⁵	0.241	12.32
PHG2.0-20R	PHG2.0-20L	0.134 - 0.053	5.20 x 10 ⁻⁵	0.261	16.50
PHG2.0-21R	PHG2.0-21L	0.134 - 0.053	7.86 x 10 ⁻⁵	0.346	17.33
PHG2.0-22R	PHG2.0-22L	0.134 - 0.053	8.98 x 10 ⁻⁵	0.368	18.15
PHG2.0-23R	PHG2.0-23L	0.134 - 0.053	1.03 x 10 ⁻⁴	0.392	18.98
PHG2.0-24R	PHG2.0-24L	0.134 - 0.053	1.17 x 10 ⁻⁴	0.416	19.80
PHG2.0-25R	PHG2.0-25L	0.177 - 0.072	1.34 x 10 ⁻⁴	0.442	20.63
PHG2.0-26R	PHG2.0-26L	0.177 - 0.072	1.53 x 10 ⁻⁴	0.469	26.99
PHG2.0-27R	PHG2.0-27L	0.177 - 0.072	1.73 x 10 ⁻⁴	0.497	28.03
PHG2.0-28R	PHG2.0-28L	0.177 - 0.072	2.36 x 10 ⁻⁴	0.611	29.07
PHG2.0-29R	PHG2.0-29L	0.177 - 0.072	2.62 x 10 ⁻⁴	0.641	30.11
PHG2.0-30R	PHG2.0-30L	0.177 - 0.072	2.91 x 10 ⁻⁴	0.672	35.50
PHG2.0-32R	PHG2.0-32L	0.177 - 0.072	3.58 x 10 ⁻⁴	0.737	37.86
PHG2.0-35R	PHG2.0-35L	0.177 - 0.072	4.85 x 10 ⁻⁴	0.843	41.41
PHG2.0-38R	PHG2.0-38L	0.177 - 0.072	6.82 x 10 ⁻⁴	1.001	44.96
PHG2.0-40R	PHG2.0-40L	0.179 - 0.070	8.15 x 10 ⁻⁴	1.083	60.57
PHG2.0-42R	PHG2.0-42L	0.179 - 0.070	9.70 x 10 ⁻⁴	1.169	63.59
PHG2.0-45R	PHG2.0-45L	0.179 - 0.070	1.25 x 10 ⁻³	1.307	68.14
PHG2.0-48R	PHG2.0-48L	0.179 - 0.070	1.69 x 10 ⁻³	1.589	72.68
PHG2.0-50R	PHG2.0-50L	0.179 - 0.070	1.95 x 10 ⁻³	1.692	94.75
PHG2.0-52R	PHG2.0-52L	0.179 - 0.070	2.25 x 10 ⁻³	1.799	98.54
PHG2.0-55R	PHG2.0-55L	0.179 - 0.070	2.77 x 10 ⁻³	1.968	104.22
PHG2.0-58R	PHG2.0-58L	0.181 - 0.068	3.54 x 10 ⁻³	2.272	109.91
PHG2.0-60R	PHG2.0-60L	0.181 - 0.068	4.01 x 10 ⁻³	2.396	129.47
PHG2.0-62R	PHG2.0-62L	0.235 - 0.101	4.52 x 10 ⁻³	2.524	133.79

PHG-RH
PHG-LH
2.0m_n

PRECISION GEARS

2.0 Module 15° Parallel Helical Gear α 20° PA

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



DIN 3967 Tooth Thickness tol.

Part Number 805M20 [#] Case Hardened		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>
RH	LH						
PHG2.0-15RH	PHG2.0-15LH	15	31.06	35.06	10	12	25
PHG2.0-16RH	PHG2.0-16LH	16	33.13	37.13	10	12	25
PHG2.0-17RH	PHG2.0-17LH	17	35.20	39.20	10	12	25
PHG2.0-18RH	PHG2.0-18LH	18	37.27	41.27	10	12	25
PHG2.0-19RH	PHG2.0-19LH	19	39.34	43.34	10	12	25
PHG2.0-20RH	PHG2.0-20LH	20	41.41	45.41	10	12	25
PHG2.0-21RH	PHG2.0-21LH	21	43.48	47.48	12	20	35
PHG2.0-22RH	PHG2.0-22LH	22	45.55	49.55	12	20	35
PHG2.0-23RH	PHG2.0-23LH	23	47.62	51.62	12	20	35
PHG2.0-24RH	PHG2.0-24LH	24	49.69	53.69	12	20	35
PHG2.0-25RH	PHG2.0-25LH	25	51.76	55.76	12	20	35
PHG2.0-26RH	PHG2.0-26LH	26	53.83	57.83	12	20	35
PHG2.0-27RH	PHG2.0-27LH	27	55.90	59.90	12	20	35
PHG2.0-28RH	PHG2.0-28LH	28	57.98	61.98	14	25	45
PHG2.0-29RH	PHG2.0-29LH	29	60.05	64.05	14	25	45
PHG2.0-30RH	PHG2.0-30LH	30	62.12	66.12	14	25	45
PHG2.0-32RH	PHG2.0-32LH	32	66.26	70.26	14	25	45
PHG2.0-35RH	PHG2.0-35LH	35	72.47	76.47	14	25	45
PHG2.0-38RH	PHG2.0-38LH	38	78.68	82.68	16	30	50
PHG2.0-40RH	PHG2.0-40LH	40	82.82	86.82	16	30	50
PHG2.0-42RH	PHG2.0-42LH	42	86.96	90.96	16	30	50
PHG2.0-45RH	PHG2.0-45LH	45	93.17	97.17	16	30	50
PHG2.0-48RH	PHG2.0-48LH	48	99.39	103.39	16	35	60
PHG2.0-50RH	PHG2.0-50LH	50	103.53	107.53	16	35	60
PHG2.0-52RH	PHG2.0-52LH	52	107.67	111.67	16	35	60
PHG2.0-55RH	PHG2.0-55LH	55	113.88	117.88	16	35	60
PHG2.0-58RH	PHG2.0-58LH	58	120.09	124.09	20	40	70
PHG2.0-60RH	PHG2.0-60LH	60	124.23	128.23	20	40	70
PHG2.0-62RH	PHG2.0-62LH	62	128.37	132.37	20	40	70

PHG-RH
PHG-LH
2.0m_n

PRECISION GEARS

2.0 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG 2.0-50 R**

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

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 20 = 20mm H7 etc
See Technical

Quality Grades and Tolerances stated prior to heat treatment processes.
η_z Meshing Efficiency approx. 98%

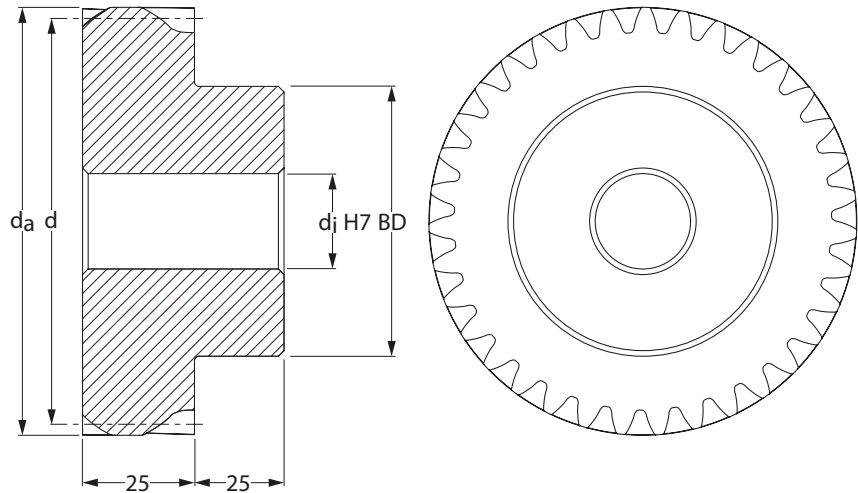
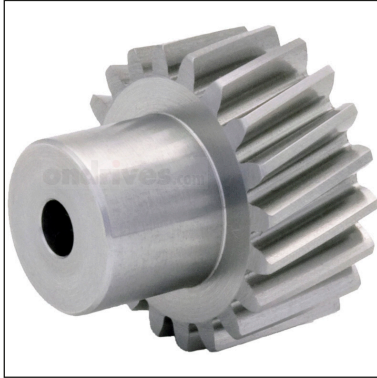
Part Number 805M20# Case Hardened		Backlash (mm)	Inertia kgm ²	Mass kg	Torque T ₂ Nm n ₂ 100 Rpm
RH	LH	j _{t,e} (max) j _{t,i} (min)			
PHG2.0-15RH	PHG2.0-15LH	0.134 - 0.053	2.09 x 10 ⁻⁵	0.170	35.65
PHG2.0-16RH	PHG2.0-16LH	0.134 - 0.053	2.52 x 10 ⁻⁵	0.186	38.03
PHG2.0-17RH	PHG2.0-17LH	0.134 - 0.053	3.03 x 10 ⁻⁵	0.203	40.41
PHG2.0-18RH	PHG2.0-18LH	0.134 - 0.053	3.64 x 10 ⁻⁵	0.222	42.79
PHG2.0-19RH	PHG2.0-19LH	0.134 - 0.053	4.36 x 10 ⁻⁵	0.241	45.16
PHG2.0-20RH	PHG2.0-20LH	0.134 - 0.053	5.20 x 10 ⁻⁵	0.261	60.51
PHG2.0-21RH	PHG2.0-21LH	0.134 - 0.053	7.86 x 10 ⁻⁵	0.346	63.53
PHG2.0-22RH	PHG2.0-22LH	0.134 - 0.053	8.98 x 10 ⁻⁵	0.368	66.56
PHG2.0-23RH	PHG2.0-23LH	0.134 - 0.053	1.03 x 10 ⁻⁴	0.392	69.58
PHG2.0-24RH	PHG2.0-24LH	0.134 - 0.053	1.17 x 10 ⁻⁴	0.416	72.61
PHG2.0-25RH	PHG2.0-25LH	0.177 - 0.072	1.34 x 10 ⁻⁴	0.442	75.63
PHG2.0-26RH	PHG2.0-26LH	0.177 - 0.072	1.53 x 10 ⁻⁴	0.469	98.97
PHG2.0-27RH	PHG2.0-27LH	0.177 - 0.072	1.73 x 10 ⁻⁴	0.497	102.78
PHG2.0-28RH	PHG2.0-28LH	0.177 - 0.072	2.36 x 10 ⁻⁴	0.611	106.58
PHG2.0-29RH	PHG2.0-29LH	0.177 - 0.072	2.62 x 10 ⁻⁴	0.641	110.39
PHG2.0-30RH	PHG2.0-30LH	0.177 - 0.072	2.91 x 10 ⁻⁴	0.672	130.15
PHG2.0-32RH	PHG2.0-32LH	0.177 - 0.072	3.58 x 10 ⁻⁴	0.737	138.83
PHG2.0-35RH	PHG2.0-35LH	0.177 - 0.072	4.85 x 10 ⁻⁴	0.843	151.84
PHG2.0-38RH	PHG2.0-38LH	0.177 - 0.072	6.82 x 10 ⁻⁴	1.001	164.86
PHG2.0-40RH	PHG2.0-40LH	0.179 - 0.070	8.15 x 10 ⁻⁴	1.083	194.48
PHG2.0-42RH	PHG2.0-42LH	0.179 - 0.070	9.70 x 10 ⁻⁴	1.169	204.20
PHG2.0-45RH	PHG2.0-45LH	0.179 - 0.070	1.25 x 10 ⁻³	1.307	218.79
PHG2.0-48RH	PHG2.0-48LH	0.179 - 0.070	1.69 x 10 ⁻³	1.589	233.37
PHG2.0-50RH	PHG2.0-50LH	0.179 - 0.070	1.95 x 10 ⁻³	1.692	263.79
PHG2.0-52RH	PHG2.0-52LH	0.179 - 0.070	2.25 x 10 ⁻³	1.799	274.34
PHG2.0-55RH	PHG2.0-55LH	0.179 - 0.070	2.77 x 10 ⁻³	1.968	290.17
PHG2.0-58RH	PHG2.0-58LH	0.181 - 0.068	3.54 x 10 ⁻³	2.272	306.00
PHG2.0-60RH	PHG2.0-60LH	0.181 - 0.068	4.01 x 10 ⁻³	2.396	329.60
PHG2.0-62RH	PHG2.0-62LH	0.235 - 0.101	4.52 x 10 ⁻³	2.524	340.59

PHG-R
PHG-L
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 Standard 817M40T		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>
RH	LH						
PHG2.5-15R	PHG2.5-15L	15	38.82	43.82	12	16	30
PHG2.5-16R	PHG2.5-16L	16	41.41	46.41	12	16	30
PHG2.5-17R	PHG2.5-17L	17	44.00	49.00	12	16	30
PHG2.5-18R	PHG2.5-18L	18	46.59	51.59	12	16	30
PHG2.5-19R	PHG2.5-19L	19	49.18	54.18	12	16	30
PHG2.5-20R	PHG2.5-20L	20	51.76	56.76	12	16	30
PHG2.5-21R	PHG2.5-21L	21	54.35	59.35	14	22	45
PHG2.5-22R	PHG2.5-22L	22	56.94	61.94	14	22	45
PHG2.5-23R	PHG2.5-23L	23	59.53	64.53	14	22	45
PHG2.5-24R	PHG2.5-24L	24	62.12	67.12	14	22	45
PHG2.5-25R	PHG2.5-25L	25	64.70	69.70	14	22	45
PHG2.5-26R	PHG2.5-26L	26	67.29	72.29	14	22	45
PHG2.5-27R	PHG2.5-27L	27	69.88	74.88	14	22	45
PHG2.5-28R	PHG2.5-28L	28	72.47	77.47	16	30	55
PHG2.5-29R	PHG2.5-29L	29	75.06	80.06	16	30	55
PHG2.5-30R	PHG2.5-30L	30	77.65	82.65	16	30	55
PHG2.5-32R	PHG2.5-32L	32	82.82	87.82	16	30	55
PHG2.5-35R	PHG2.5-35L	35	90.59	95.59	16	30	55
PHG2.5-38R	PHG2.5-38L	38	98.35	103.35	16	35	65
PHG2.5-40R	PHG2.5-40L	40	103.53	108.53	16	35	65
PHG2.5-42R	PHG2.5-42L	42	108.70	113.70	16	35	65
PHG2.5-45R	PHG2.5-45L	45	116.47	121.47	20	40	75
PHG2.5-48R	PHG2.5-48L	48	124.23	129.23	20	40	75
PHG2.5-50R	PHG2.5-50L	50	129.41	134.41	20	40	75

PHG-R
PHG-L
2.5m_n

PRECISION GEARS

2.5 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG** **2.5** **50** **R**

Modified Part **PHG** **2.5** **50** **L** **H** **25** **K** **T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 25 = 25mm H7 etc
See Technical

η_z Meshing Efficiency approx. 98%

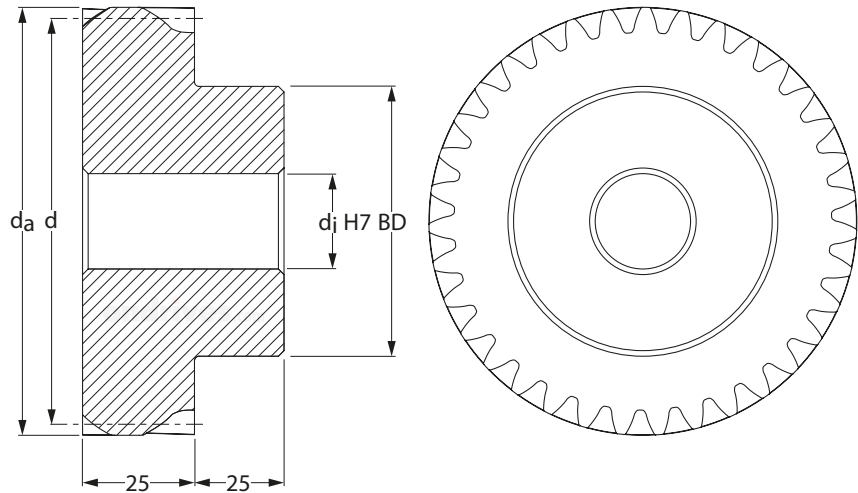
Part Number Standard 817M40T		Backlash (mm) <i>j_{t.e} (max) j_{t.i} (min)</i>	Inertia <i>kgm²</i>	Mass <i>kg</i>	Torque <i>T₂ Nm</i> <i>n₂ 100 Rpm</i>
RH	LH				
PHG2.5-15R	PHG2.5-15L	0.134 - 0.053	6.12 x 10 ⁻⁵	0.324	18.16
PHG2.5-16R	PHG2.5-16L	0.134 - 0.053	7.42 x 10 ⁻⁵	0.356	19.37
PHG2.5-17R	PHG2.5-17L	0.134 - 0.053	8.99 x 10 ⁻⁵	0.389	20.59
PHG2.5-18R	PHG2.5-18L	0.134 - 0.053	1.09 x 10 ⁻⁴	0.425	21.80
PHG2.5-19R	PHG2.5-19L	0.134 - 0.053	1.30 x 10 ⁻⁴	0.463	23.01
PHG2.5-20R	PHG2.5-20L	0.177 - 0.072	1.56 x 10 ⁻⁴	0.502	30.82
PHG2.5-21R	PHG2.5-21L	0.177 - 0.072	2.49 x 10 ⁻⁴	0.702	32.36
PHG2.5-22R	PHG2.5-22L	0.177 - 0.072	2.83 x 10 ⁻⁴	0.745	33.90
PHG2.5-23R	PHG2.5-23L	0.177 - 0.072	3.22 x 10 ⁻⁴	0.791	35.45
PHG2.5-24R	PHG2.5-24L	0.177 - 0.072	3.67 x 10 ⁻⁴	0.839	36.99
PHG2.5-25R	PHG2.5-25L	0.177 - 0.072	4.17 x 10 ⁻⁴	0.889	38.53
PHG2.5-26R	PHG2.5-26L	0.177 - 0.072	4.74 x 10 ⁻⁴	0.942	50.42
PHG2.5-27R	PHG2.5-27L	0.177 - 0.072	5.38 x 10 ⁻⁴	0.996	52.36
PHG2.5-28R	PHG2.5-28L	0.177 - 0.072	7.06 x 10 ⁻⁴	1.188	54.30
PHG2.5-29R	PHG2.5-29L	0.177 - 0.072	7.85 x 10 ⁻⁴	1.246	56.23
PHG2.5-30R	PHG2.5-30L	0.177 - 0.072	8.74 x 10 ⁻⁴	1.307	66.30
PHG2.5-32R	PHG2.5-32L	0.179 - 0.070	1.08 x 10 ⁻³	1.434	70.72
PHG2.5-35R	PHG2.5-35L	0.179 - 0.070	1.47 x 10 ⁻³	1.640	77.35
PHG2.5-38R	PHG2.5-38L	0.179 - 0.070	2.13 x 10 ⁻³	2.050	83.98
PHG2.5-40R	PHG2.5-40L	0.179 - 0.070	2.54 x 10 ⁻³	2.210	113.13
PHG2.5-42R	PHG2.5-42L	0.179 - 0.070	3.01 x 10 ⁻³	2.380	118.79
PHG2.5-45R	PHG2.5-45L	0.179 - 0.070	4.12 x 10 ⁻³	2.817	127.27
PHG2.5-48R	PHG2.5-48L	0.181 - 0.068	5.16 x 10 ⁻³	3.104	135.75
PHG2.5-50R	PHG2.5-50L	0.235 - 0.101	5.96 x 10 ⁻³	3.305	176.98

PHG-RH
PHG-LH
2.5m_n

PRECISION GEARS

2.5 Module 15° Parallel Helical Gear α 20° PA

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



DIN 3967 Tooth Thickness tol.

Part Number 805M20 [#] Case Hardened		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>
RH	LH						
PHG2.5-15RH	PHG2.5-15LH	15	38.82	43.82	12	16	30
PHG2.5-16RH	PHG2.5-16LH	16	41.41	46.41	12	16	30
PHG2.5-17RH	PHG2.5-17LH	17	44.00	49.00	12	16	30
PHG2.5-18RH	PHG2.5-18LH	18	46.59	51.59	12	16	30
PHG2.5-19RH	PHG2.5-19LH	19	49.18	54.18	12	16	30
PHG2.5-20RH	PHG2.5-20LH	20	51.76	56.76	12	16	30
PHG2.5-21RH	PHG2.5-21LH	21	54.35	59.35	14	22	45
PHG2.5-22RH	PHG2.5-22LH	22	56.94	61.94	14	22	45
PHG2.5-23RH	PHG2.5-23LH	23	59.53	64.53	14	22	45
PHG2.5-24RH	PHG2.5-24LH	24	62.12	67.12	14	22	45
PHG2.5-25RH	PHG2.5-25LH	25	64.70	69.70	14	22	45
PHG2.5-26RH	PHG2.5-26LH	26	67.29	72.29	14	22	45
PHG2.5-27RH	PHG2.5-27LH	27	69.88	74.88	14	22	45
PHG2.5-28RH	PHG2.5-28LH	28	72.47	77.47	16	30	55
PHG2.5-29RH	PHG2.5-29LH	29	75.06	80.06	16	30	55
PHG2.5-30RH	PHG2.5-30LH	30	77.65	82.65	16	30	55
PHG2.5-32RH	PHG2.5-32LH	32	82.82	87.82	16	30	55
PHG2.5-35RH	PHG2.5-35LH	35	90.59	95.59	16	30	55
PHG2.5-38RH	PHG2.5-38LH	38	98.35	103.35	16	35	65
PHG2.5-40RH	PHG2.5-40LH	40	103.53	108.53	16	35	65
PHG2.5-42RH	PHG2.5-42LH	42	108.70	113.70	16	35	65
PHG2.5-45RH	PHG2.5-45LH	45	116.47	121.47	20	40	75
PHG2.5-48RH	PHG2.5-48LH	48	124.23	129.23	20	40	75
PHG2.5-50RH	PHG2.5-50LH	50	129.41	134.41	20	40	75

PHG-RH
PHG-LH
2.5m_n

PRECISION GEARS

2.5 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG** **2.5** **50** **R**

Modified Part **PHG** **2.5** **50** **L** **H** **25** **K** **T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 25 = 25mm H7 etc
See Technical

Quality Grades and Tolerances stated prior to heat treatment processes.
η_z Meshing Efficiency approx. 98%

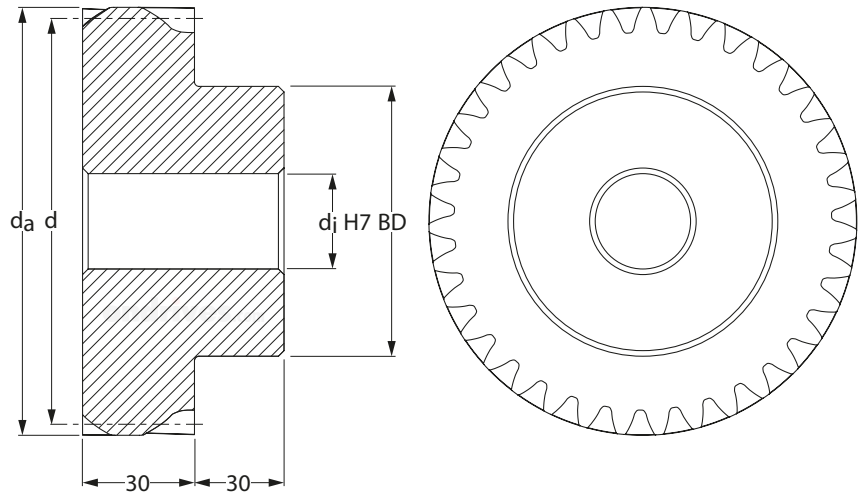
Part Number 805M20# Case Hardened		Backlash (mm) <i>j_{t,e} (max) j_{t,i} (min)</i>	Inertia <i>kgm²</i>	Mass <i>kg</i>	Torque <i>T₂ Nm</i> <i>n₂ 100 Rpm</i>
RH	LH				
PHG2.5-15RH	PHG2.5-15LH	0.134 - 0.053	6.12 x 10 ⁻⁵	0.324	66.60
PHG2.5-16RH	PHG2.5-16LH	0.134 - 0.053	7.42 x 10 ⁻⁵	0.356	71.04
PHG2.5-17RH	PHG2.5-17LH	0.134 - 0.053	8.99 x 10 ⁻⁵	0.389	75.48
PHG2.5-18RH	PHG2.5-18LH	0.134 - 0.053	1.09 x 10 ⁻⁴	0.425	79.92
PHG2.5-19RH	PHG2.5-19LH	0.134 - 0.053	1.30 x 10 ⁻⁴	0.463	84.36
PHG2.5-20RH	PHG2.5-20LH	0.177 - 0.072	1.56 x 10 ⁻⁴	0.502	113.02
PHG2.5-21RH	PHG2.5-21LH	0.177 - 0.072	2.49 x 10 ⁻⁴	0.702	118.67
PHG2.5-22RH	PHG2.5-22LH	0.177 - 0.072	2.83 x 10 ⁻⁴	0.745	124.32
PHG2.5-23RH	PHG2.5-23LH	0.177 - 0.072	3.22 x 10 ⁻⁴	0.791	129.97
PHG2.5-24RH	PHG2.5-24LH	0.177 - 0.072	3.67 x 10 ⁻⁴	0.839	135.62
PHG2.5-25RH	PHG2.5-25LH	0.177 - 0.072	4.17 x 10 ⁻⁴	0.889	141.27
PHG2.5-26RH	PHG2.5-26LH	0.177 - 0.072	4.74 x 10 ⁻⁴	0.942	184.86
PHG2.5-27RH	PHG2.5-27LH	0.177 - 0.072	5.38 x 10 ⁻⁴	0.996	191.97
PHG2.5-28RH	PHG2.5-28LH	0.177 - 0.072	7.06 x 10 ⁻⁴	1.188	199.08
PHG2.5-29RH	PHG2.5-29LH	0.177 - 0.072	7.85 x 10 ⁻⁴	1.246	206.19
PHG2.5-30RH	PHG2.5-30LH	0.177 - 0.072	8.74 x 10 ⁻⁴	1.307	243.11
PHG2.5-32RH	PHG2.5-32LH	0.179 - 0.070	1.08 x 10 ⁻³	1.434	259.32
PHG2.5-35RH	PHG2.5-35LH	0.179 - 0.070	1.47 x 10 ⁻³	1.640	283.63
PHG2.5-38RH	PHG2.5-38LH	0.179 - 0.070	2.13 x 10 ⁻³	2.050	307.94
PHG2.5-40RH	PHG2.5-40LH	0.179 - 0.070	2.54 x 10 ⁻³	2.210	379.84
PHG2.5-42RH	PHG2.5-42LH	0.179 - 0.070	3.01 x 10 ⁻³	2.380	398.83
PHG2.5-45RH	PHG2.5-45LH	0.179 - 0.070	4.12 x 10 ⁻³	2.817	427.31
PHG2.5-48RH	PHG2.5-48LH	0.181 - 0.068	5.16 x 10 ⁻³	3.104	455.80
PHG2.5-50RH	PHG2.5-50LH	0.235 - 0.101	5.96 x 10 ⁻³	3.305	515.22

PHG-R
PHG-L
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 Standard 817M40T		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>
RH	LH						
PHG3.0-15R	PHG3.0-15L	15	46.59	52.59	14	20	38
PHG3.0-16R	PHG3.0-16L	16	49.69	55.69	14	20	38
PHG3.0-17R	PHG3.0-17L	17	52.80	58.80	14	20	38
PHG3.0-18R	PHG3.0-18L	18	55.90	61.90	14	20	38
PHG3.0-19R	PHG3.0-19L	19	59.01	65.01	14	20	38
PHG3.0-20R	PHG3.0-20L	20	62.12	68.12	14	20	38
PHG3.0-21R	PHG3.0-21L	21	65.22	71.22	14	20	38
PHG3.0-22R	PHG3.0-22L	22	68.33	74.33	16	30	55
PHG3.0-23R	PHG3.0-23L	23	71.43	77.43	16	30	55
PHG3.0-24R	PHG3.0-24L	24	74.54	80.54	16	30	55
PHG3.0-25R	PHG3.0-25L	25	77.65	83.65	16	30	55
PHG3.0-26R	PHG3.0-26L	26	80.75	86.75	16	30	55
PHG3.0-27R	PHG3.0-27L	27	83.86	89.86	16	30	55
PHG3.0-28R	PHG3.0-28L	28	86.96	92.96	16	30	55
PHG3.0-29R	PHG3.0-29L	29	90.07	96.07	20	40	70
PHG3.0-30R	PHG3.0-30L	30	93.17	99.17	20	40	70
PHG3.0-32R	PHG3.0-32L	32	99.39	105.39	20	40	70
PHG3.0-35R	PHG3.0-35L	35	108.70	114.70	20	40	70
PHG3.0-38R	PHG3.0-38L	38	118.02	124.02	20	40	70
PHG3.0-40R	PHG3.0-40L	40	124.23	130.23	20	40	70

PHG-R
PHG-L
3.0m_n

PRECISION GEARS

3.0 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG** **3.0** **40** **R**

Modified Part **PHG** **3.0** **40** **L** **H** **30** **K** **T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 30 = 30mm H7 etc
See Technical

η_z Meshing Efficiency approx. 98%

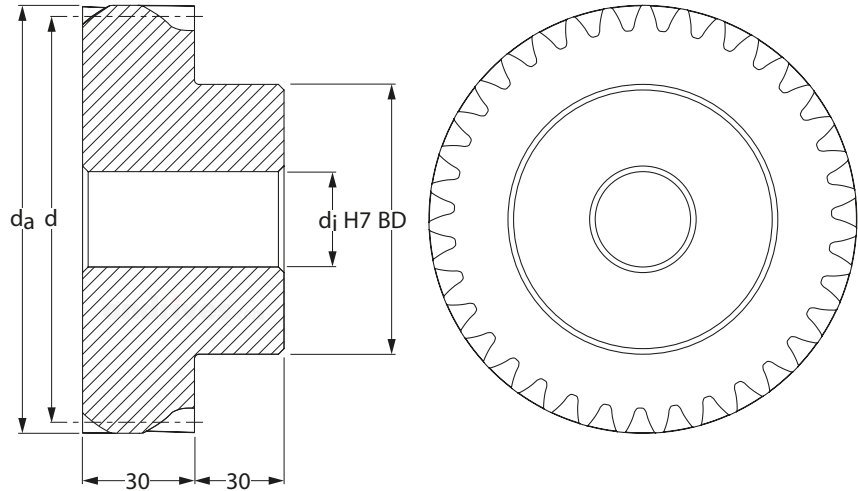
Part Number Standard 817M40T		Backlash (mm) <i>j_{t,e} (max) j_{t,i} (min)</i>	Inertia <i>kgm²</i>	Mass <i>kg</i>	Torque <i>T₂ Nm</i> <i>n₂ 100 Rpm</i>
RH	LH				
PHG3.0-15R	PHG3.0-15L	0.134 - 0.053	1.62 x 10 ⁻⁴	0.592	30.26
PHG3.0-16R	PHG3.0-16L	0.134 - 0.053	1.94 x 10 ⁻⁴	0.646	32.28
PHG3.0-17R	PHG3.0-17L	0.177 - 0.072	2.33 x 10 ⁻⁴	0.704	34.30
PHG3.0-18R	PHG3.0-18L	0.177 - 0.072	2.80 x 10 ⁻⁴	0.766	36.31
PHG3.0-19R	PHG3.0-19L	0.177 - 0.072	3.34 x 10 ⁻⁴	0.831	38.33
PHG3.0-20R	PHG3.0-20L	0.177 - 0.072	3.98 x 10 ⁻⁴	0.900	51.35
PHG3.0-21R	PHG3.0-21L	0.177 - 0.072	4.72 x 10 ⁻⁴	0.972	53.92
PHG3.0-22R	PHG3.0-22L	0.177 - 0.072	7.20 x 10 ⁻⁴	1.318	56.49
PHG3.0-23R	PHG3.0-23L	0.177 - 0.072	8.17 x 10 ⁻⁴	1.397	59.06
PHG3.0-24R	PHG3.0-24L	0.177 - 0.072	9.28 x 10 ⁻⁴	1.480	61.62
PHG3.0-25R	PHG3.0-25L	0.177 - 0.072	1.05 x 10 ⁻³	1.567	64.19
PHG3.0-26R	PHG3.0-26L	0.179 - 0.070	1.20 x 10 ⁻³	1.657	84.00
PHG3.0-27R	PHG3.0-27L	0.179 - 0.070	1.36 x 10 ⁻³	1.751	87.23
PHG3.0-28R	PHG3.0-28L	0.179 - 0.070	1.53 x 10 ⁻³	1.848	90.46
PHG3.0-29R	PHG3.0-29L	0.179 - 0.070	2.07 x 10 ⁻³	2.270	93.69
PHG3.0-30R	PHG3.0-30L	0.179 - 0.070	2.29 x 10 ⁻³	2.375	110.47
PHG3.0-32R	PHG3.0-32L	0.179 - 0.070	2.80 x 10 ⁻³	2.594	117.83
PHG3.0-35R	PHG3.0-35L	0.179 - 0.070	3.76 x 10 ⁻³	2.950	128.88
PHG3.0-38R	PHG3.0-38L	0.179 - 0.070	5.01 x 10 ⁻³	3.339	139.93
PHG3.0-40R	PHG3.0-40L	0.181 - 0.069	6.02 x 10 ⁻³	3.615	188.49

PHG-RH
PHG-LH
3.0m_n

PRECISION GEARS

3.0 Module 15° Parallel Helical Gear α 20° PA

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



DIN 3967 Tooth Thickness tol.

Part Number 805M20 [#] Case Hardened		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>
RH	LH						
PHG3.0-15RH	PHG3.0-15LH	15	46.59	52.59	14	20	38
PHG3.0-16RH	PHG3.0-16LH	16	49.69	55.69	14	20	38
PHG3.0-17RH	PHG3.0-17LH	17	52.80	58.80	14	20	38
PHG3.0-18RH	PHG3.0-18LH	18	55.90	61.90	14	20	38
PHG3.0-19RH	PHG3.0-19LH	19	59.01	65.01	14	20	38
PHG3.0-20RH	PHG3.0-20LH	20	62.12	68.12	14	20	38
PHG3.0-21RH	PHG3.0-21LH	21	65.22	71.22	14	20	38
PHG3.0-22RH	PHG3.0-22LH	22	68.33	74.33	16	30	55
PHG3.0-23RH	PHG3.0-23LH	23	71.43	77.43	16	30	55
PHG3.0-24RH	PHG3.0-24LH	24	74.54	80.54	16	30	55
PHG3.0-25RH	PHG3.0-25LH	25	77.65	83.65	16	30	55
PHG3.0-26RH	PHG3.0-26LH	26	80.75	86.75	16	30	55
PHG3.0-27RH	PHG3.0-27LH	27	83.86	89.86	16	30	55
PHG3.0-28RH	PHG3.0-28LH	28	86.96	92.96	16	30	55
PHG3.0-29RH	PHG3.0-29LH	29	90.07	96.07	20	40	70
PHG3.0-30RH	PHG3.0-30LH	30	93.17	99.17	20	40	70
PHG3.0-32RH	PHG3.0-32LH	32	99.39	105.39	20	40	70
PHG3.0-35RH	PHG3.0-35LH	35	108.70	114.70	20	40	70
PHG3.0-38RH	PHG3.0-38LH	38	118.02	124.02	20	40	70
PHG3.0-40RH	PHG3.0-40LH	40	124.23	130.23	20	40	70

PHG-RH
PHG-LH
3.0m_n

PRECISION GEARS

3.0 Module 15° Parallel Helical Gear α 20° PA

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

Standard Part **PHG 3.0-40 R**

Modified Part **PHG 3.0-40 L H 30 K T**

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

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
H = 805M20# Case Hardened

T = 1 x Tapped hole **2T** = 2 x Tapped holes
P = 1 x Pin Hole **PT** = 1 x Pin Hole through
All threads metric as standard.
See Technical

K- Keyway supplied to
DIN 6885 - Js9 tolerance.
See Technical

To specify different bore enter size required
Example: 30 = 30mm H7 etc
See Technical

Quality Grades and Tolerances stated prior to heat treatment processes.
η_z Meshing Efficiency approx. 98%

Part Number 805M20# Case Hardened		Backlash (mm) <i>j_{t,e} (max) j_{t,i} (min)</i>	Inertia <i>kgm²</i>	Mass <i>kg</i>	Torque <i>T₂ Nm</i> <i>n₂ 100 Rpm</i>
RH	LH				
PHG3.0-15RH	PHG3.0-15LH	0.134 - 0.053	1.62 x 10 ⁻⁴	0.592	110.96
PHG3.0-16RH	PHG3.0-16LH	0.134 - 0.053	1.94 x 10 ⁻⁴	0.646	118.36
PHG3.0-17RH	PHG3.0-17LH	0.177 - 0.072	2.33 x 10 ⁻⁴	0.704	125.76
PHG3.0-18RH	PHG3.0-18LH	0.177 - 0.072	2.80 x 10 ⁻⁴	0.766	133.15
PHG3.0-19RH	PHG3.0-19LH	0.177 - 0.072	3.34 x 10 ⁻⁴	0.831	140.55
PHG3.0-20RH	PHG3.0-20LH	0.177 - 0.072	3.98 x 10 ⁻⁴	0.900	188.30
PHG3.0-21RH	PHG3.0-21LH	0.177 - 0.072	4.72 x 10 ⁻⁴	0.972	197.71
PHG3.0-22RH	PHG3.0-22LH	0.177 - 0.072	7.20 x 10 ⁻⁴	1.318	207.13
PHG3.0-23RH	PHG3.0-23LH	0.177 - 0.072	8.17 x 10 ⁻⁴	1.397	216.54
PHG3.0-24RH	PHG3.0-24LH	0.177 - 0.072	9.28 x 10 ⁻⁴	1.480	225.96
PHG3.0-25RH	PHG3.0-25LH	0.177 - 0.072	1.05 x 10 ⁻³	1.567	235.37
PHG3.0-26RH	PHG3.0-26LH	0.179 - 0.070	1.20 x 10 ⁻³	1.657	308.00
PHG3.0-27RH	PHG3.0-27LH	0.179 - 0.070	1.36 x 10 ⁻³	1.751	319.85
PHG3.0-28RH	PHG3.0-28LH	0.179 - 0.070	1.53 x 10 ⁻³	1.848	331.70
PHG3.0-29RH	PHG3.0-29LH	0.179 - 0.070	2.07 x 10 ⁻³	2.270	343.54
PHG3.0-30RH	PHG3.0-30LH	0.179 - 0.070	2.29 x 10 ⁻³	2.375	405.05
PHG3.0-32RH	PHG3.0-32LH	0.179 - 0.070	2.80 x 10 ⁻³	2.594	432.05
PHG3.0-35RH	PHG3.0-35LH	0.179 - 0.070	3.76 x 10 ⁻³	2.950	472.56
PHG3.0-38RH	PHG3.0-38LH	0.179 - 0.070	5.01 x 10 ⁻³	3.339	513.06
PHG3.0-40RH	PHG3.0-40LH	0.181 - 0.069	6.02 x 10 ⁻³	3.615	656.36