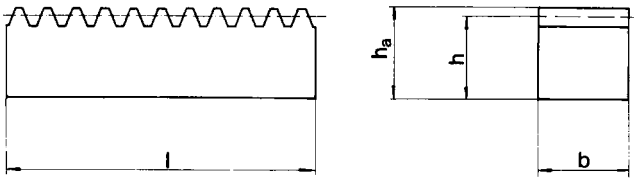


Metric Gear Racks

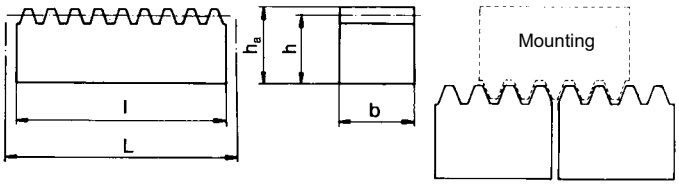
20º Pressure Angle DIN 782

Material: Steel 1.0503 (C45) AISI 1045

Tolerance: Overall ±0.5, Between Teeth ±0.02

Part No.	Module	h_a	h	b	l	Weight kg
M1X250	1	15	14	15	250	0.412
M1X500	1	15	14	15	500	0.824
M1X1000	1	15	14	15	1,000	1.648
M1X2000	1	15	14	15	2,000	3.050
M1X2500	1	15	14	15	2,500	4.123
M1X3000	1	15	14	15	3,000	4.947
M1.5X500	1.5	17	15.5	17	500	1.035
M1.5X1000	1.5	17	15.5	17	1,000	2.070
M1.5X2000	1.5	17	15.5	17	2,000	3.830
M1.5X2500	1.5	17	15.5	17	2,500	5.175
M1.5X3000	1.5	17	15.5	17	3,000	6.210
M2X250	2	20	18	20	250	0.705
M2X500	2	20	18	20	500	1.410
M2X1000	2	20	18	20	1,000	2.820
M2X2000	2	20	18	20	2,000	5.115
M2X2500	2	20	18	20	2,500	7.050
M2X3000	2	20	18	20	3,000	8.460
M2.5X250	2.5	25	22.5	25	250	0.993
M2.5X500	2.5	25	22.5	25	500	1.990
M2.5X1000	2.5	25	22.5	25	1,000	3.970
M2.5X2000	2.5	25	22.5	25	2,000	7.350
M2.5X2500	2.5	25	22.5	25	2,500	9.925
M2.5X3000	2.5	25	22.5	25	3,000	11.910
M3X250	3	30	27	30	250	1.550
M3X500	3	30	27	30	500	3.100
M3X1000	3	30	27	30	1,000	6.200
M3X2000	3	30	27	30	2,000	11.470
M3X2500	3	30	27	30	2,500	15.500
M3X3000	3	30	27	30	3,000	18.600
M4X25X1000	4	25	21	25	1,000	5.167
M4X25X2000	4	25	21	25	2,000	10.333
M4X30X1000	4	30	26	30	1,000	6.100
M4X30X2000	4	30	26	30	2,000	11.700
M4X40X250	4	40	36	40	250	2.750
M4X40X500	4	40	36	40	500	5.500
M4X40X1000	4	40	36	40	1,000	11.000
M4X40X2000	4	40	36	40	2,000	20.350
M4X40X2500	4	40	36	40	2,500	27.500
M4X40X3000	4	40	36	40	3,000	33.000
M5X250	5	50	45	50	250	3.975
M5X500	5	50	45	50	500	7.950
M5X1000	5	50	45	50	1,000	15.900
M5X2000	5	50	45	50	2,000	29.415
M5X2500	5	50	45	50	2,500	39.750
M5X3000	5	50	45	50	3,000	47.700
M6X500	6	60	54	60	500	12.650
M6X1000	6	60	54	60	1,000	24.300
M6X2000	6	60	54	60	2,000	50.200
M6X2500	6	60	54	60	2,500	60.750
M6X3000	6	60	54	60	3,000	72.900
M8X500	8	80	72	80	500	21.400
M8X1000	8	80	72	80	1,000	42.700
M8X2000	8	80	72	80	2,000	85.400

Special modifications available upon request.



Metric Gear Racks
20º Pressure Angle DIN 782

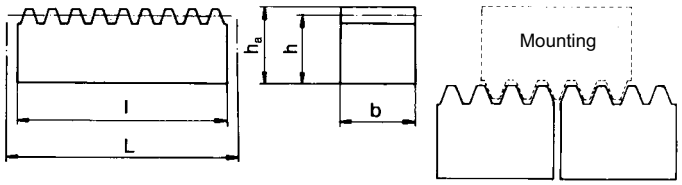
Continuous Mounting - Material: Stainless Steel 1.4305 (AISI 3030)

Part No.	Module	Height h_a	h	Width b (h11)	Length L
SSM1X10X500	1	9.8-0.10	8.8-0.10	10	500
SSM1X10X1000	1	9.8-0.15	8.8-0.15	10	1,000
SSM1.5X15X500	1.5	14.8-0.10	13.3-0.10	15	500
SSM1.5X15X1000	1.5	14.8-0.15	13.3-0.15	15	1,000
SSM2X20X1000	2	19.75-0.15	17.75-0.15	20	1,000
SSM2X20X2000	2	19.75-0.25	17.75-0.25	20	2,000
SSM3X30X1000	3	29.75-0.20	26.75-0.20	30	1,000
SSM3X30X2000	3	29.75-0.30	26.75-0.30	30	2,000
SSM4X40X1000	4	39.70-0.20	35.70-0.20	40	1,000
SSM4X40X2000	4	39.70-0.30	35.70-0.30	40	2,000

Induction Hardened, Continuous Mounting

Part No.	Module	Teeth	Height h_a (- tol.)	h (- tol.)	b tol. h11	theor. L	l (± tol.)	Weight kg
..M1X10X250	1	80	9.8 -0.10	8.8 -0.10	10	251.327	250.8 ±0.5	0.17
..M1X10X500	1	159	9.8 -0.10	8.8 -0.10	10	499.513	499.0 ±0.5	0.34
..M1X10X1000	1	318	9.8 -0.15	8.8 -0.15	10	999.026	998.5 ±0.5	0.68
..M1.5X15X250	1.5	53	14.8 -0.10	13.3 -0.10	15	249.757	249.3 ±0.5	0.39
..M1.5X15X500	1.5	106	14.8 -0.10	13.3 -0.10	15	499.513	499.1 ±0.5	0.78
..M1.5X15X1000	1.5	212	14.8 -0.15	13.3 -0.15	15	999.026	998.6 ±0.5	1.55
..M1.5X15X2000	1.5	424	14.8 -0.15	13.3 -0.15	15	1,998.053	1,997.6 ±0.5	3.10
..M2X20X500	2	80	19.75 -0.10	17.75 -0.10	20	502.655	502.1 ±0.5	1.40
..M2X20X1000	2	159	19.75 -0.15	17.75 -0.15	20	999.026	998.5 ±0.5	2.80
..M2X20X2000	2	318	19.75 -0.25	17.75 -0.25	20	1,998.053	1,997.5 ±0.5	5.60
..M2.5X25X500	2.5	64	24.75 -0.10	22.25 -0.10	25	502.655	502.1 ±0.3	2.10
..M2.5X25X1000	2.5	127	24.75 -0.15	22.25 -0.15	25	997.456	996.9 ±0.3	4.20
..M2.5X25X2000	2.5	255	24.75 -0.25	22.25 -0.25	25	2,002.765	2,002.3 ±0.3	8.40
..M3X30X500	3	53	29.75 -0.10	26.75 -0.10	30	499.513	498.9 ±0.5	3.10
..M3X30X1000	3	106	29.75 -0.20	26.75 -0.20	30	999.026	998.4 ±0.5	6.20
..M3X30X2000	3	212	29.75 -0.30	26.75 -0.30	30	1,998.053	1,997.4 ±0.5	12.40
..M4X40X500	4	40	39.70 -0.10	35.70 -0.10	40	502.655	501.9 ±0.5	5.50
..M4X40X1000	4	80	39.70 -0.20	35.70 -0.20	40	1,005.313	1,004.6 ±0.5	11.00
..M4X40X2000	4	159	39.70 -0.30	35.70 -0.30	40	1,998.053	1,997.3 ±0.5	22.00
..M5X50X500	5	32	49.70 -0.10	44.70 -0.10	50	502.655	501.8 ±0.6	8.60
..M5X50X1000	5	64	49.70 -0.20	44.70 -0.20	50	1,005.310	1,004.5 ±0.6	17.20
..M5X50X2000	5	128	49.70 -0.30	44.70 -0.30	50	2,010.619	2,009.8 ±0.6	34.40
..M6X60X500	6	27	59.65 -0.10	53.65 -0.10	60	508.938	508.0 ±0.6	12.30
..M6X60X1000	6	53	59.65 -0.20	53.65 -0.20	60	999.026	998.1 ±0.6	24.50
..M6X60X2000	6	106	59.65 -0.30	53.65 -0.30	60	1,998.053	1,997.2 ±0.6	49.00
..M8X80X500	8	20	79.60 -0.30	71.60 -0.30	80	502.655	501.4 ±0.7	21.40
..M8X80X1000	8	40	79.60 -0.40	71.60 -0.40	80	1,005.310	1,004.0 ±0.7	42.70
..M8X80X2000	8	80	79.60 -0.50	71.60 -0.50	80	2,010.619	2,009.4 ±0.7	85.40

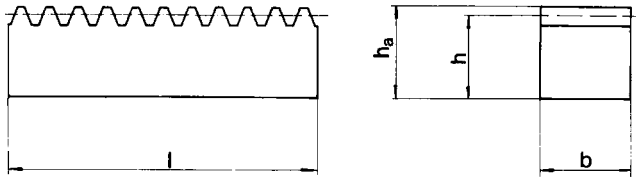
Note: Add the prefix of the part number CM.. for continuous mounting or HTC.. for induction hardened, continuous mounting type rack



Metric Gear Racks
20º Pressure Angle DIN 782

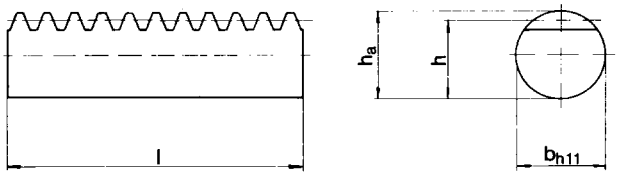
Material: Nylon P 6.6

Part No.	Module	Height h_a	h	Width b (h11)	Length L
NM1X10X250	1	10	9.0	10	250
NM1X10X500	1	10	9.0	10	500
NM1.5X15X250	1.5	15	13.5	15	250
NM1.5X15X500	1.5	15	13.5	15	500
NM2X20X500	2	20	18.0	20	500
NM2X20X1000	2	20	18.0	20	1000
NM2.5X25X500	2.5	25	22.5	25	500
NM2.5X25X1000	2.5	25	22.5	25	1000



Injection Molded - Material: Acetal Resin (Hostaform C)

Part No.	Module	h_a	h	b	l	Weight g
AM0.5X4.5X4X250	0.5	4.5	4	4	250	5
AM0.5X6X4X250	0.5	6	5.5	4	250	7
AM0.7X6.7X6X250	0.7	6.7	6	6	250	12
AM1X9X9X250	1.0	9	8	9	250	25
AM1.25X11X10X250	1.25	11	9.75	10	250	35
AM1.5X12X12X250	1.5	12	10.5	12	250	45
AM2X11X15.4X250	2.0	11	9.0	15.4	250	45
AM2.5X13X17X250	2.5	13	10.5	17	250	50
AM3X15X19.4X250	3.0	15	12	19.4	250	75



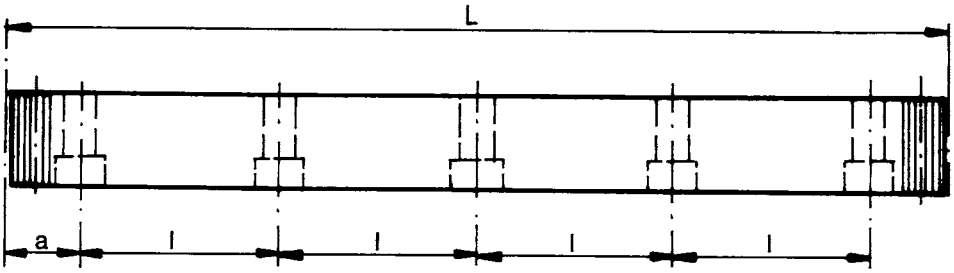
Metric Round Gear Racks

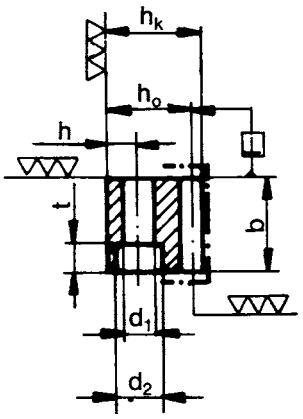
20º Pressure Angle DIN 782

Material: Steel 1.0503 (C45) AISI 1045

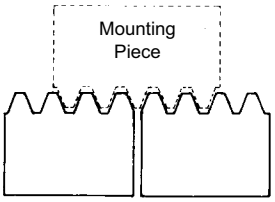
Part No.	Module	h_a (- tol.)	h (- tol.)	h_{h11}	l	Weight kg
RM1X250	1	9.80 -0.10	8.8 -0.10	10	250	0.14
RM1X500	1	9.80 -0.10	8.8 -0.10	10	500	0.27
RM1.5X250	1.5	14.80 -0.10	13.3 -0.10	15	250	0.31
RM1.5X500	1.5	14.80 -0.10	13.3 -0.10	15	500	0.61
RM1.5X1000	1.5	14.80 -0.15	13.3 -0.15	15	1,000	1.22
RM2X250	2	19.75 -0.10	17.75 -0.10	20	250	0.55
RM2X500	2	19.75 -0.10	17.75 -0.10	20	500	1.10
RM2X1000	2	19.75 -0.15	17.75 -0.15	20	1,000	2.20
RM2.5X250	2.5	24.75 -0.10	22.25 -0.10	25	250	0.83
RM2.5X500	2.5	24.75 -0.10	22.25 -0.10	25	500	1.65
RM2.5X1000	2.5	24.75 -0.15	22.25 -0.15	25	1,000	3.30
RM3X250	3	29.75 -0.10	26.75 -0.10	30	250	1.22
RM3X500	3	29.75 -0.10	26.75 -0.10	30	500	2.44
RM3X1000	3	29.75 -0.20	26.75 -0.20	30	1,000	4.80
RM4X250	4	39.70 -0.10	35.70 -0.10	40	250	2.16
RM4X500	4	39.70 -0.10	35.70 -0.10	40	500	4.32
RM4X1000	4	39.70 -0.20	35.70 -0.20	40	1,000	8.64
RM5X250	5	49.70 -0.10	44.70 -0.10	50	250	3.38
RM5X500	5	49.70 -0.10	44.70 -0.10	50	500	6.75
RM5X1000	5	49.70 -0.20	44.70 -0.20	50	1,000	13.50

Gear Racks with Ground Teeth
Material: Steel 1.0503 (C45) AISI 1045
Hardness: 54 HRC Pressure Angle: 20º





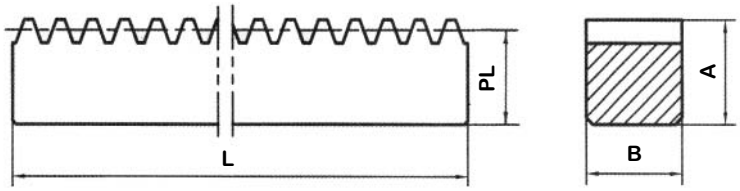
Part No.	Module	L	Teeth	b	$h_{k\,(h11)}$	h_o	a	l	h	d_1	d_2	t	Weight kg
GHM2X24X1000	2	999	159	24	24	22	99.5	200	8	6.6	11	7	4.2
GHM3X29X1000	3	999	106	29	29	26	99.5	200	9	9	15	9	6.0
GHM4X39X1000	4	1,005	80	39	39	35	102.6	200	12	9	15	9	10.5



Mounting Pieces

Part No.	Module	L	Teeth	b
GHPM2	2	200	32	25
GHPM3	3	200	21	30
GHPM4	4	253	20	40

American Standard (ANSI) Gear Racks
Pressure Angle 14 1/2° and 20° In Steel



Sample Part:
14R3x2
14.5=Degrees Pressure Angle
3=Pitch
2=Length in Feet

14 1/2° Pressure Angle

Part No.	DP	B	A	PL	Weight
14R3x2	3	3	1 1/2	1.167	24.0
14R3x4	3	3	1 1/2	1.167	48.0
14R3x6	3	3	1 1/2	1.167	72.0
14R4x2	4	2	1 1/2	1.250	17.4
14R4x4	4	2	1 1/2	1.250	34.8
14R4x6	4	2	1 1/2	1.250	52.2
14RA4x2	4	2	2	1.750	23.6
14RA4x4	4	2	2	1.750	47.2
14RA4x6	4	2	2	1.750	70.8
14R5x2	5	1 3/4	1 1/4	1.050	12.8
14R5x4	5	1 3/4	1 1/4	1.050	25.6
14R5x6	5	1 3/4	1 1/4	1.050	38.4
14RA5x2	5	1 3/4	1 1/2	1.300	16.0
14RA5x4	5	1 3/4	1 1/2	1.300	32.0
14RA5x6	5	1 3/4	1 1/2	1.300	48.0
14R6x2	6	1 1/2	1	0.833	8.6
14R6x4	6	1 1/2	1	0.833	17.2
14R6x6	6	1 1/2	1	0.833	25.8
14RA6x2	6	1 1/2	1 1/2	1.333	13.8
14RA6x4	6	1 1/2	1 1/2	1.333	27.6
14RA6x6	6	1 1/2	1 1/2	1.333	41.4
14R8x2	8	1 1/4	3/4	0.625	5.2
14R8x4	8	1 1/4	3/4	0.625	10.4
14R8x6	8	1 1/4	3/4	0.625	15.6
14RA8x2	8	1 1/4	1 1/4	1.125	9.8
14RA8x4	8	1 1/4	1 1/4	1.125	19.6
14RA8x6	8	1 1/4	1 1/4	1.125	29.4

14 1/2° Pressure Angle

Part No.	DP	B	A	PL	Weight
14R10x2	10	1	5/8	0.525	3.6
14R10x4	10	1	5/8	0.525	7.2
14R10x6	10	1	5/8	0.525	10.8
14RA10x2	10	1	1	0.900	6.0
14RA10x4	10	1	1	0.900	12.0
14RA10x6	10	1	1	0.900	18.0
14R12x2	12	3/4	1/2	0.417	2.0
14R12x4	12	3/4	1/2	0.417	4.0
14R12x6	12	3/4	1/2	0.417	6.0
14RA12x2	12	3/4	3/4	0.667	3.4
14RA12x4	12	3/4	3/4	0.667	6.8
14RA12x6	12	3/4	3/4	0.667	10.2
14R16x2	16	5/16	5/16	0.250	0.50
14R16x4	16	5/16	5/16	0.250	1.00
14R16x6	16	5/16	5/16	0.250	1.50
14RA16x2	16	1/2	1/2	0.438	1.52
14RA16x4	16	1/2	1/2	0.438	3.04
14RA16x6	16	1/2	1/2	0.438	4.56
14R20x2	20	3/8	3/8	0.325	0.84
14R20x4	20	3/8	3/8	0.325	1.68
14R20x6	20	3/8	3/8	0.325	2.52
14R24x2	24	1/4	1/4	0.208	0.38
14R24x4	24	1/4	1/4	0.208	0.76
14R24x6	24	1/4	1/4	0.208	1.14

20° Pressure Angle

Part No.	DP	B	A	PL	Weight
20R3x2	3	3	1 1/2	1.167	24.0
20R3x4	3	3	1 1/2	1.167	48.0
20R3x6	3	3	1 1/2	1.167	72.0
20R4x2	4	2	1 1/2	1.250	17.4
20R4x4	4	2	1 1/2	1.250	34.8
20R4x6	4	2	1 1/2	1.250	52.2
20R5x2	5	1 3/4	1 1/4	1.050	12.8
20R5x4	5	1 3/4	1 1/4	1.050	25.6
20R5x6	5	1 3/4	1 1/4	1.050	38.4
20R6x2	6	1 1/2	1 1/2	1.333	13.8
20R6x4	6	1 1/2	1 1/2	1.333	27.6
20R6x6	6	1 1/2	1 1/2	1.333	41.4
20R8x2	8	1 1/4	1 1/4	1.125	9.8
20R8x4	8	1 1/4	1 1/4	1.125	19.6
20R8x6	8	1 1/4	1 1/4	1.125	29.4
20R10x2	10	1	1	0.900	6.0
20R10x4	10	1	1	0.900	12.0
20R10x6	10	1	1	0.900	18.0
20R12x2	12	3/4	3/4	0.667	3.4
20R12x4	12	3/4	3/4	0.667	6.8
20R12x6	12	3/4	3/4	0.667	10.2
20R16x2	16	3/8	3/8	0.438	1.52
20R16x4	16	3/8	3/8	0.438	3.04
20R16x6	16	3/8	3/8	0.438	4.56
20R20x2	20	1/4	1/4	0.325	0.84
20R20x4	20	1/4	1/4	0.325	1.68
20R20x6	20	1/4	1/4	0.325	2.52

Wide Face 20° Pressure Angle

Part No.	DP	B	A	PL	Weight
20WR4x2	4	3 1/2	2	1.750	41.0
20WR4x4	4	3 1/2	2	1.750	82.0
20WR4x6	4	3 1/2	2	1.750	123.0
20WR5x2	5	2 1/2	1 1/2	1.300	22.4
20WR5x4	5	2 1/2	1 1/2	1.300	44.8
20WR5x6	5	2 1/2	1 1/2	1.300	67.2
20WR6x2	6	2	1 1/4	1.333	17.0
20WR6x4	6	2	1 1/4	1.333	34.0
20WR6x6	6	2	1 1/4	1.333	51.0
20WR8x2	8	1 1/2	1 1/2	1.375	13.8
20WR8x4	8	1 1/2	1 1/2	1.375	27.6
20WR8x6	8	1 1/2	1 1/2	1.375	41.3
20WR10x2	10	1 1/4	1 1/4	1.150	9.0
20WR10x4	10	1 1/4	1 1/4	1.150	18.0
20WR10x6	10	1 1/4	1 1/4	1.150	27.0
20WR12x2	12	1	1	0.917	6.40
20WR12x4	12	1	1	0.917	12.8
20WR12x6	12	1	1	0.917	19.2
20WR16x2	16	3/4	3/4	0.688	3.4
20WR16x4	16	3/4	3/4	0.688	6.8
20WR16x6	16	3/4	3/4	0.688	10.2
20WR20x2	20	1/2	1/2	0.450	0.8
20WR20x4	20	1/2	1/2	0.450	1.6
20WR20x6	20	1/2	1/2	0.450	2.5