Class	ATLANTA Quality	Module	Total Pitch Error [1] (± µm/m)	Tooth Thickness Tolerance (µm)	Maximum Length (mm)	Maximum Feed Force Per Pinion Contact [2] (kN)	Application Examples
UHPR Ultra High Precision Rack	5 Hardened & Ground	2	30	-15	1000	19.5	High-precision machine tools, Laser cutting systems, CNC cutting machines
		3	30	-15	1000	28.5	
HPR High Precision Rack	6 Hardened & Ground	2	34	-20	1000	19.5	Machine tools, Waterjet/Plasma/Laser cutting machines, CNC cutting machines, Tube bending systems, Robots, Automation
		3	34	-20	1000	31.0	
		4	34	-20	1000	60.0	
	6 Hardened & Ground	1.5	34	-20	1000	9.0	Machine tools, Waterjet/Plasma/Laser cutting machines, CNC cutting machines, Tube bending systems, Robots, Automation
		2	34	-20	2000	15.5	
		3	34	-20	2000	28.5	
		4	34	-20	2000	51.5	
		5	34	-20	2000	76.0	
		6	34	-20	2000	109.0	
		8	34	-20	1920	191.0	
		10	34	-20	1500	287.0	
		12	34	-20	1000	409.0	
	7 Hardened & Ground	2	52	-36	2000	15.5	Woodworking/Waterjet/Plasma/Laser cutting machines, CNC cutting machines, Tube bending systems, Robots, Automation
		3	52	-36	2000	28.5	
		4	52	-36	2000	51.5	
		5	52	-36	2000	76.0	
		6	52	-36	2000	109.0	
		8	52	-36	1920	191.0	
		10	52	-36	1500	287.0	
PR Precision Rack	8 Hardened & Ground	2	60	-58	2000	13.5	Material handling, Robots, Automation
		3	60	-58	2000	24.5	
		4	60	-58	2000	44.0	
		5	60	-58	2000	64.5	
		6	60	-58	2000	90.5	
	8 Quenched & Tempered, Milled	2	100	-110	2000	8.0	Material handling, Robots, Automation
		3	100	-110	2000	14.0	
		4	100	-110	2000	27.0	
BR Basic Rack	10 Induction-Hardened Milled	1.5	200	-110	1000	3.5	Lifting axis, Material handling, Welding robots
		2	200	-110	2000	9.5	
		3	200	-110	2000	17.5	
		4	200	-110	2000	32.0	
		5	200	-110	2000	49.0	
		6	200	-110	2000	67.5	
		8	200	-110	1920	118.5	
		10	200	-110	1000	178.5	
		12	200	-110	1000	252.5	

1) Values are for rack lengths of 1,000 mm. For total pitch errors values for other rack lengths, please see the respective catalog pages.

2) Values are only valid for special steel according ATLANTA-Standard.

When using the maximum capacity of the teeth, or multiple pinions in contact, the mounting screw loads must be checked separately! Please ask ATLANTA for advice!

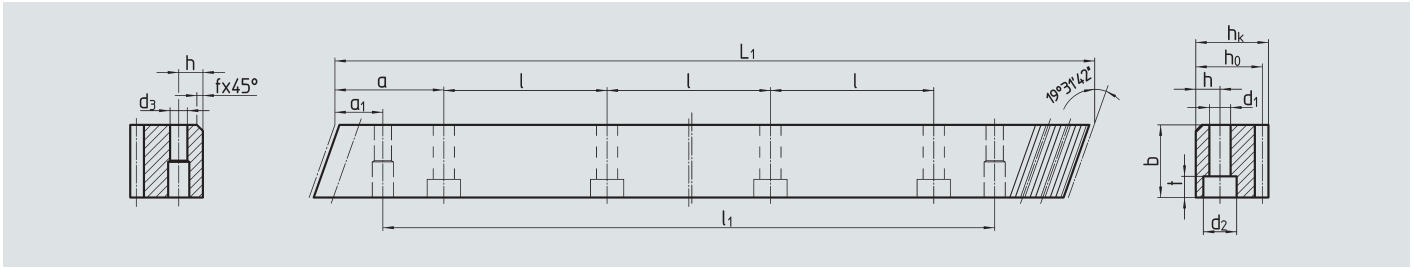
Class & Quality			UHPR 5	HPR 6	HPR 6	HPR 7	PR 8	PR 8	BR 10
Material			Heat-Treat Steel 1)	Case-Hardened 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)
Heat Treatment			High-Performance Hardening	High-Performance Hardening	High-Performance Hardening	High-Performance Hardening	High-Performance Hardening	Quenched & Tempered	High-Performance Hardening
Module	Mounting Holes	Rack Lengths mm	Order Code						
1.5	✓	500			29 15 055				39 15 050
		1000			29 15 105				39 15 100
	×	500							39 16 050
		1000			29 16 105				39 16 100
2	✓	500		29 20 050	29 20 055			38 21 050	39 20 050
		1000	5 01 79 004	29 20 100	29 20 105	29 20 107	29 20 108	38 21 100	39 20 100
		1500			29 20 155	29 20 157	29 20 158		
		2000			29 20 205	29 20 207	29 20 208	38 21 200	39 20 200
	×	500		29 21 050					39 21 050
		1000		29 21 100	29 21 105			38 20 100	39 21 100
		2000			29 21 205			38 20 200	39 21 200
3	✓	500		29 30 050	29 30 055			38 31 050	39 30 050
		1000	5 01 79 005	29 30 100	29 30 105	29 30 107	29 30 108	38 31 100	39 30 100
		1500			29 30 155	29 30 157	29 30 158		
		2000			29 30 205	29 30 207	29 30 208	38 31 200	39 30 200
	×	500		29 31 050					39 31 050
		1000		29 31 100	29 31 105			38 30 100	39 31 100
		2000			29 31 205			38 30 200	39 31 200
4	✓	500		29 40 050					39 40 050
		1000		29 40 100	29 40 105			38 41 100	39 40 100
		2000			29 40 205			38 41 200	39 40 200
	✓ Large Holes	1000		29 42 100	29 42 105	29 40 107	29 40 108		
		1500			29 42 155	29 40 157	29 40 158		
		2000			29 42 205	29 40 207	29 40 208		
	×	500		29 41 050					
		1000		29 41 100	29 41 105			38 40 100	39 41 100
		2000			29 41 205			38 40 200	39 41 200
5	✓	500			29 50 055				
		1000			29 50 105	29 50 107	29 50 108		39 50 100
		2000			29 50 205	29 50 207	29 50 208		39 50 200
	×	1000			29 51 105				39 51 100
		2000			29 51 205				
6	✓	500			29 60 055				
		1000			29 60 105	29 60 107	29 60 108		39 60 100
		2000			29 60 205	29 60 207	29 60 208		39 60 200
	×	1000			29 61 105				39 61 100
		2000			29 61 205				39 61 200
8	✓	1000			29 80 105				
		2000			29 80 205				
	×	1000			29 81 105				39 81 100
		2000			29 81 205				39 81 200
10	✓	1000			29 10 105				
	×	1000			29 11 105				39 11 100
12	✓	1000			29 12 105				
	×	1000			29 13 105				39 13 100
Page			C-14	C-15	C-16	C-17	C-18	C-19	C-20 – C-21

1) According to ATLANTA-Standard

✓ With mounting holes

× Without mounting holes

ATLANTA Quality 5



Order Code	Module	L_1	N° of Teeth	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
501 79 004	2	1000.00	150	24	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.10
501 79 005	3	1000.00	150	29	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	5.90

Total Pitch Error: GT_f / 1000 ≤ 0.030 mm

- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

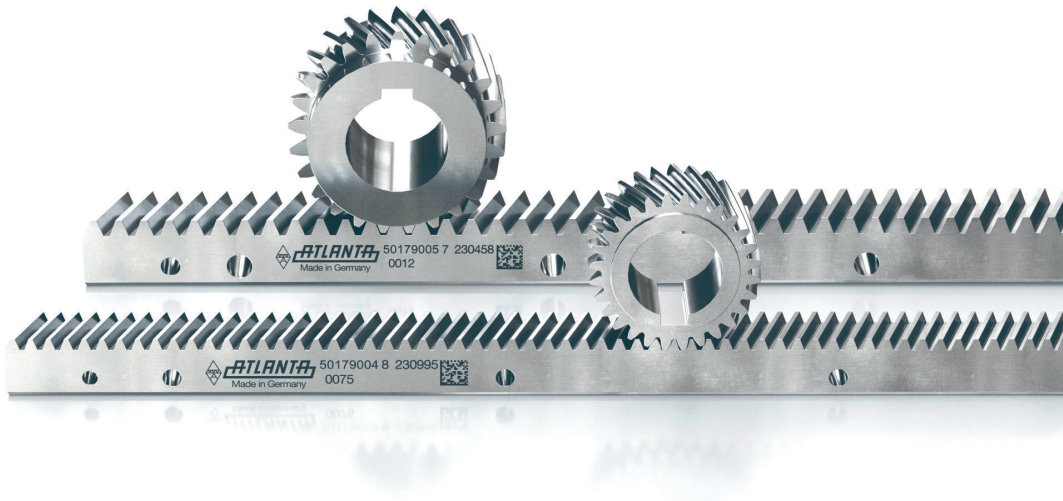
For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96.

For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D.

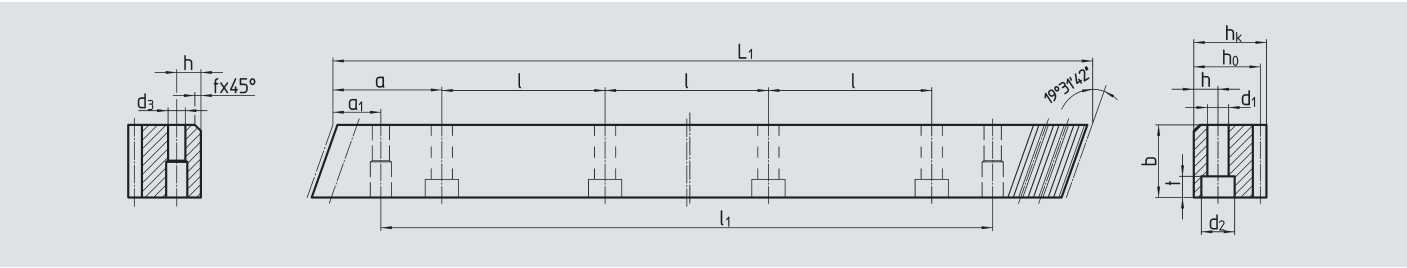
For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.



All dimensions are in mm

ATLANTA Quality 6



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
29 20 050 [2]	2	500.00	75	24	24	22	2	62.5	125	4	8	7	11	7	31.7	436.6	5.7	2.10
29 21 050	2	500.00	75	24	24	22	2	without mounting holes										2.10
29 20 100	2	1000.00	150	24	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.10
29 21 100	2	1000.00	150	24	24	22	2	without mounting holes										4.10
29 30 050 [2]	3	500.00	50	29	29	26	2	62.5	125	4	9	10	15	9	35.0	430.0	7.7	2.90
29 31 050	3	500.00	50	29	29	26	2	without mounting holes										2.90
29 30 100	3	1000.00	100	29	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	5.90
29 31 100	3	1000.00	100	29	29	26	2	without mounting holes										5.90
29 40 050 [1)2)]	4	506.67	38	39	39	35	2	62.5	125	4	12	10	15	9	33.3	433.0	7.7	5.40
29 31 050	4	506.67	38	39	39	35	2	without mounting holes										5.40
29 40 100	4	1000.00	75	39	39	35	2	62.5	125	8	12	10	15	9	33.3	933.4	7.7	10.70
29 41 100	4	1000.00	75	39	39	35	2	without mounting holes										10.70
29 42 100	4	1000.00	75	39	39	35	2	62.5	125	8	12	14	20	13	33.3	933.4	11.7	10.70

1) This rack can only be used for continuous linking with the left side (see sketch).
2) Due to the screw connection, the feed force is max. 50 % of the value for racks with L1 = 1,000 mm

Total Pitch Error: GT_f **/ 500 ≤ 0.026 mm**
GT_f **/1000 ≤ 0.034 mm**

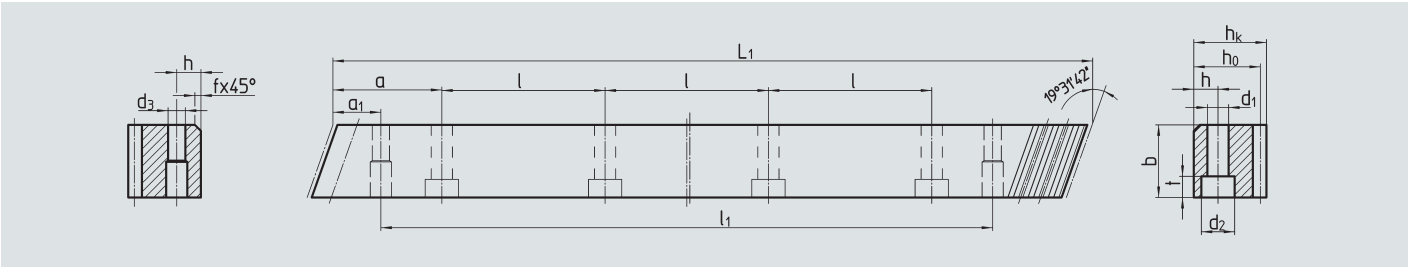
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 6



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
29 15 055 [2]	1.5	500.00	100	19	19	17.5	2	62.5	125	4	8	7	11	7	31.7	436.6	5.7	1.30
29 15 105	1.5	1000.00	200	19	19	17.5	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	2.60
29 16 105	1.5	1000.00	200	19	19	17.5	2		without mounting holes									2.60
29 20 055 [2]	2	500.00	75	24	24	22	2	62.5	125	4	8	7	11	7	31.7	436.6	5.7	2.10
29 20 105	2	1000.00	150	24	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.10
29 21 105	2	1000.00	150	24	24	22	2		without mounting holes									4.10
29 20 155	2	1500.00	225	24	24	22	2	62.5	125	12	8	7	11	7	31.7	1436.6	5.7	6.15
29 20 205	2	2000.00	300	24	24	22	2	62.5	125	16	8	7	11	7	31.7	1936.6	5.7	8.20
29 21 205	2	2000.00	300	24	24	22	2		without mounting holes									8.20
29 30 055 [2]	3	500.00	50	29	29	26	2	62.5	125	4	9	10	15	9	35.0	430.0	7.7	2.90
29 30 105	3	1000.00	100	29	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	5.90
29 31 105	3	1000.00	100	29	29	26	2		without mounting holes									5.90
29 30 155	3	1500.00	150	29	29	26	2	62.5	125	12	9	10	15	9	35.0	1430.0	7.7	8.85
29 30 205	3	2000.00	200	29	29	26	2	62.5	125	16	9	10	15	9	35.0	1930.0	7.7	11.80
29 31 205	3	2000.00	200	29	29	26	2		without mounting holes									11.80
29 40 105	4	1000.00	75	39	39	35	2	62.5	125	8	12	10	15	9	33.3	933.4	7.7	10.70
29 41 105	4	1000.00	75	39	39	35	2		without mounting holes									10.70
29 42 105	4	1000.00	75	39	39	35	2	62.5	125	8	12	14	20	13	33.3	933.4	11.7	10.70
29 42 155 [1]	4	1506.67	113	39	39	35	2	62.5	125	12	12	14	20	13	33.3	1433.4	11.7	16.05
29 40 205	4	2000.00	150	39	39	35	2	62.5	125	16	12	10	15	9	33.3	1933.4	7.7	21.40
29 41 205	4	2000.00	150	39	39	35	2		without mounting holes									21.40
29 42 205	4	2000.00	150	39	39	35	2	62.5	125	16	12	14	20	13	33.3	1933.4	11.7	21.40
29 50 055 [2]	5	500.00	30	49	39	34	2.5	62.5	125	4	12	14	20	13	37.5	425.0	11.7	6.50
29 50 105	5	1000.00	60	49	39	34	2.5	62.5	125	8	12	14	20	13	37.5	925.0	11.7	13.00
29 51 105	5	1000.00	60	49	39	34	2.5		without mounting holes									13.00
29 50 155	5	1500.00	120	49	39	34	2.5	62.5	125	12	12	14	20	13	37.5	1425.0	11.7	19.50
29 50 205	5	2000.00	120	49	39	34	2.5	62.5	125	16	12	14	20	13	37.5	1925.0	11.7	26.00
29 51 205	5	2000.00	120	49	39	34	2.5		without mounting holes									26.00
29 60 055 [2]	6	500.00	25	59	49	43	2.5	62.5	125	4	16	18	26	17	37.5	425.0	15.7	9.90
29 60 105	6	1000.00	50	59	49	43	2.5	62.5	125	8	16	18	26	17	37.5	925.0	15.7	18.10
29 61 105	6	1000.00	50	59	49	43	2.5		without mounting holes									18.10
29 60 155	6	1500.00	75	59	49	43	2.5	62.5	125	12	16	18	26	17	37.5	1425.0	15.7	27.10
29 60 205	6	2000.00	100	59	49	43	2.5	62.5	125	16	16	18	26	17	37.5	1925.0	15.7	36.20
29 61 205	6	2000.00	100	59	49	43	2.5		without mounting holes									36.20
29 80 105	8	960.00	36	79	79	71	2.5	60.0	120	8	25	22	33	21	120.0	720.0	19.7	42.50
29 81 105	8	960.00	36	79	79	71	2.5		without mounting holes									42.50
29 80 205	8	1920.00	72	79	79	71	2.5	60.0	120	16	25	22	33	21	120.0	1680.0	19.7	85.00
29 81 205	8	1920.00	72	79	79	71	2.5		without mounting holes									85.00
29 10 105 [3]	10	1000.00	30	99	99	89	2.5	62.5	125	8	32	33	48	32	125.0	750.0	19.7	68.72
29 11 105 [3]	10	1000.00	30	99	99	89	2.5		without mounting holes									68.72
29 10 155 [3]	10	1500.00	45	99	99	89	2.5	62.5	125	12	32	33	48	32	125	1250.0	19.7	103.00
29 12 105 [3]	12	1000.00	25	120	120	108	2.5	40.0	125	8	40	39	58	38	125.0	750.0	19.7	111.00
29 13 105 [3]	12	1000.00	25	120	120	108	2.5		without mounting holes									111.00

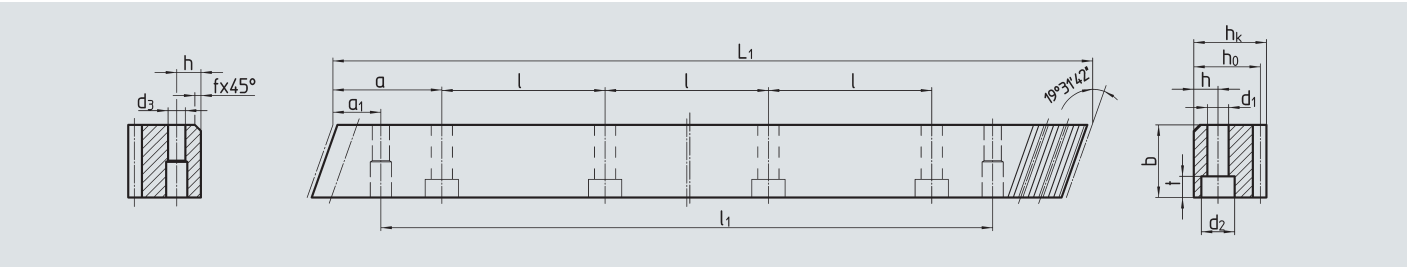
1) This rack can only be used for continuous linking with the left side
2) Due to the screw connection, the feed force is max. 50 % of the value for racks with L1 = 1,000 mm
3) On Request

Total Pitch Error: **GT_f/ 500 ≤ 0.026 mm**
GT_f/1000 ≤ 0.034 mm
GT_f/1500 ≤ 0.041 mm (≙ 0.027 mm / 1000)
GT_f/2000 ≤ 0.044 mm (≙ 0.022 mm / 1000)

For further information see next page

All dimensions are in mm

ATLANTA Quality 7



Order Code	Module	L_1	N° of Teeth	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
29 20 107	2	1000.00	150	24	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.10
29 20 157	2	1500.00	225	24	24	22	2	62.5	125	12	8	7	11	7	31.7	1436.6	5.7	6.15
29 20 207	2	2000.00	300	24	24	22	2	62.5	125	16	8	7	11	7	31.7	1936.6	5.7	8.20
29 30 107	3	1000.00	100	29	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	5.90
29 30 157	3	1500.00	150	29	29	26	2	62.5	125	12	9	10	15	9	35.0	1430.0	7.7	8.85
29 30 207	3	2000.00	200	29	29	26	2	62.5	125	16	9	10	15	9	35.0	1930.0	7.7	11.80
29 40 107	4	1000.00	75	39	39	35	2	62.5	125	8	12	14	20	13	33.3	933.4	11.7	10.70
29 40 157 [1]	4	1506.67	113	39	39	35	2	62.5	125	12	12	14	20	13	33.3	1433.0	11.7	16.00
29 40 207	4	2000.00	150	39	39	35	2	62.5	125	16	12	14	20	13	33.3	1933.4	11.7	21.40
29 50 107	5	1000.00	60	49	39	34	2.5	62.5	125	8	12	14	20	13	37.5	925.0	11.7	13.00
29 50 207	5	2000.00	120	49	39	34	2.5	62.5	125	16	12	14	20	13	37.5	1925.0	11.7	26.00
29 60 107	6	1000.00	50	59	49	43	2.5	62.5	125	8	16	18	26	17	37.5	925.0	15.7	18.10
29 60 207	6	2000.00	100	59	49	43	2.5	62.5	125	16	16	18	26	17	37.5	1925.0	15.7	36.20

1) This rack can only be used for continuous linking with the left side

Other lengths on request

Total Pitch Error: $GT_f/1000 \leq 0.052$ mm
$GT_f/1500 \leq 0.062$ mm (≙ 0.042 mm / 1000)
$GT_f/2000 \leq 0.068$ mm (≙ 0.034 mm / 1000)

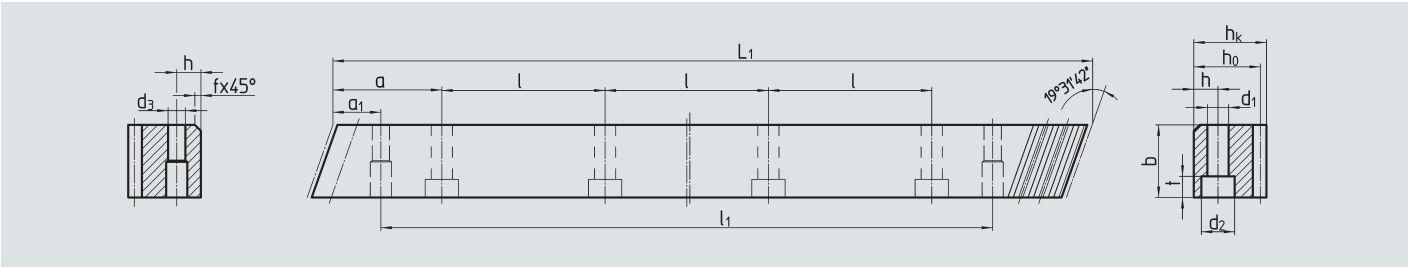
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 8



Order Code	Module	L_1	N° of Teeth	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
29 20 108	2	1000.00	150	24	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.12
29 20 158	2	1500.00	225	24	24	22	2	62.5	125	12	8	7	11	7	31.7	1436.6	5.7	6.15
29 20 208	2	2000.00	300	24	24	22	2	62.5	125	16	8	7	11	7	31.7	1936.6	5.7	8.00
29 30 108	3	1000.00	100	29	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	5.70
29 30 158	3	1500.00	150	29	29	26	2	62.5	125	12	9	10	15	9	35.0	1430.0	7.7	8.90
29 30 208	3	2000.00	200	29	29	26	2	62.5	125	16	9	10	15	9	35.0	1930.0	7.7	11.20
29 40 108	4	1000.00	75	39	39	35	2	62.5	125	8	12	14	20	13	33.3	933.4	11.7	10.10
29 40 158 [1]	4	1506.67	113	39	39	35	2	62.5	125	12	12	14	20	13	33.3	1433.4	11.7	16.00
29 40 208	4	2000.00	150	39	39	35	2	62.5	125	16	12	14	20	13	33.3	1933.4	11.7	20.16
29 50 108	5	1000.00	60	49	39	34	2.5	62.5	125	8	12	14	20	13	37.5	925.0	11.7	13.00
29 50 208	5	2000.00	120	49	39	34	2.5	62.5	125	16	12	14	20	13	37.5	1925.0	11.7	24.52
29 60 108	6	1000.00	50	59	49	43	2.5	62.5	125	8	16	18	26	17	37.5	925.0	15.7	18.25
29 60 208	6	2000.00	100	59	49	43	2.5	62.5	125	16	16	18	26	17	37.5	1925.0	15.7	36.20

1) This rack can only be used for continuous linking with the left side

Other lengths and without mounting holes on request

Total Pitch Error: **GT_f/1000 ≤ 0.060 mm**
GT_f/1500 ≤ 0.072 mm (≙ 0.048 mm / 1000)
GT_f/2000 ≤ 0.078 mm (≙ 0.039 mm / 1000)

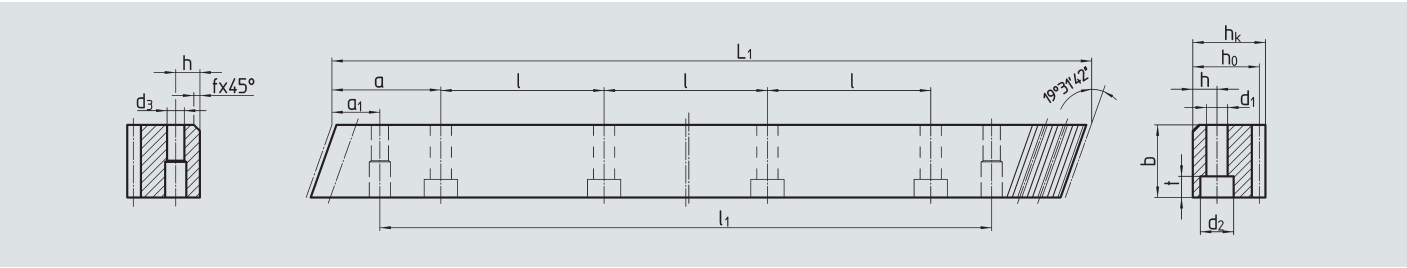
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 8



Order Code	Module	L_1	N° of Teeth	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
38 21 050 [2]	2	500.00	75	25	24	22	2	62.5	125	4	8	7	11	7	31.7	436.6	5.7	2.10
38 21 100	2	1000.00	150	25	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.30
38 20 100	2	1000.00	150	25	24	22	2	without mounting holes										4.30
38 21 200	2	2000.00	300	25	24	22	2	62.5	125	16	8	7	11	7	31.7	1936.6	5.7	8.60
38 20 200	2	2000.00	300	25	24	22	2	without mounting holes										8.60
38 31 050 [2]	3	500.00	50	30	29	26	2	62.5	125	4	9	10	15	9	35.0	430.0	7.7	3.00
38 31 100	3	1000.00	100	30	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	6.10
38 30 100	3	1000.00	100	30	29	26	2	without mounting holes										6.10
38 31 200	3	2000.00	200	30	29	26	2	62.5	125	16	9	10	15	9	35.0	1930.0	7.7	12.20
38 30 200	3	2000.00	200	30	29	26	2	without mounting holes										12.20
38 41 100	4	1000.00	75	40	39	35	2	62.5	125	8	12	10	15	9	33.3	933.4	7.7	10.90
38 40 100	4	1000.00	75	40	39	35	2	without mounting holes										10.90
38 41 200	4	2000.00	150	40	39	35	2	62.5	125	16	12	10	15	9	33.3	1933.4	7.7	21.80
38 40 200	4	2000.00	150	40	39	35	2	without mounting holes										21.80

2) Due to the screw connection, the feed force is maximum 50 % of the value for racks with L1 = 1,000 mm

Total Pitch Error: GT_f/ 500 ≤ 0.050 mm
GT_f/1000 ≤ 0.100 mm
GT_f/2000 ≤ 0.200 mm

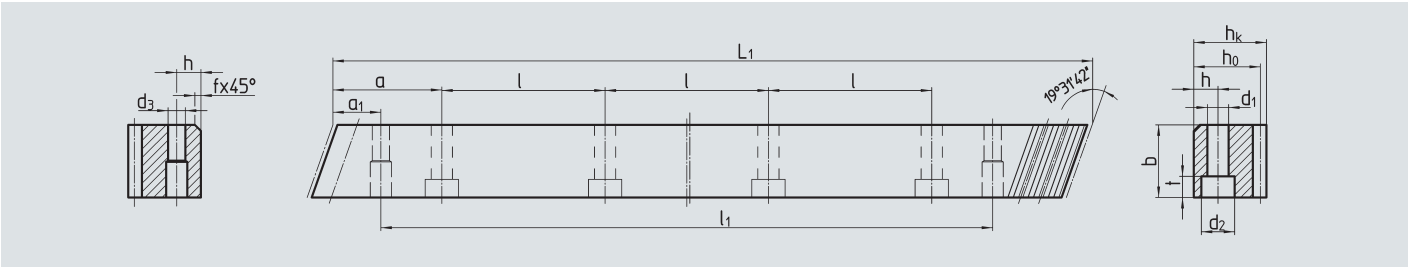
- Teeth milled, quenched & tempered
- Heat-treatable steel according to ATLANTA-Standard
- Backside machined

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 10



Order Code	Module	L_1	N° of Teeth	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
39 15 050 [2]	1.5	500.00	100	17	17	15.5	2	62.5	125	4	6	6	10	6	31.7	436.6	5.7	2.00
39 16 050	1.5	500.00	100	17	17	15.5	2	without mounting holes										2.00
39 15 100	1.5	1000.00	200	17	17	15.5	2	62.5	125	8	6	6	10	6	31.7	936.6	5.7	2.60
39 16 100	1.5	1000.00	200	17	17	15.5	2	without mounting holes										2.60
39 20 050 [2]	2	500.00	75	25	24	22	2	62.5	125	4	8	7	11	7	31.7	436.6	2.7	2.10
39 21 050	2	500.00	75	25	24	22	2	without mounting holes										2.10
39 20 100	2	1000.00	150	25	24	22	2	62.5	125	8	8	7	11	7	31.7	936.6	5.7	4.20
39 21 100	2	1000.00	150	25	24	22	2	without mounting holes										4.20
39 20 200	2	2000.00	300	25	24	22	2	62.5	125	16	8	7	11	7	31.7	1936.6	5.7	8.40
39 21 200	2	2000.00	300	25	24	22	2	without mounting holes										8.40
39 30 050 [2]	3	500.00	50	30	29	26	2	62.5	125	4	9	10	15	9	35.0	430.0	7.7	3.00
39 31 050	3	500.00	50	30	29	26	2	without mounting holes										3.00
39 30 100	3	1000.00	100	30	29	26	2	62.5	125	8	9	10	15	9	35.0	930.0	7.7	6.00
39 31 100	3	1000.00	100	30	29	26	2	without mounting holes										6.00
39 30 200	3	2000.00	200	30	29	26	2	62.5	125	16	9	10	15	9	35.0	1930.0	7.7	12.00
39 31 200	3	2000.00	200	30	29	26	2	without mounting holes										12.00
39 40 050 [1][2]	4	506.67	38	40	39	35	2	62.5	125	4	12	10	15	9	33.3	433.0	7.7	5.30
39 40 100	4	1000.00	75	40	39	35	2	62.5	125	8	12	10	15	9	33.3	933.4	7.7	10.50
39 41 100	4	1000.00	75	40	39	35	2	without mounting holes										10.50
39 40 200	4	2000.00	150	40	39	35	2	62.5	125	16	12	10	15	9	33.3	1933.4	7.7	21.00
39 41 200	4	2000.00	150	40	39	35	2	without mounting holes										21.00
39 50 100	5	1000.00	60	50	39	34	2.5	62.5	125	8	12	14	20	13	37.5	925.0	11.7	13.00
39 51 100	5	1000.00	60	50	39	34	2.5	without mounting holes										13.00
39 50 200	5	2000.00	120	50	39	34	2.5	62.5	125	16	12	14	20	13	37.5	1925.0	11.7	26.00
39 60 100	6	1000.00	50	60	49	43	2.5	62.5	125	8	16	18	26	17	37.5	925.0	15.7	19.80
39 61 100	6	1000.00	50	60	49	43	2.5	without mounting holes										19.80
39 60 200	6	2000.00	100	60	49	43	2.5	62.5	125	16	16	18	26	17	37.5	1925.0	15.7	39.60
39 61 200	6	2000.00	100	60	49	43	2.5	without mounting holes										39.60

1) This rack can only be used for continuous linking with the left side
2) Due to the screw connection, the feed force is maximum 50 % of the value for racks with L1 = 1,000 mm

Total Pitch Error: $GT_f/\ 500 \leq 0.100$ mm
$GT_f/1000 \leq 0.200$ mm
$GT_f/1500 \leq 0.300$ mm
$GT_f/2000 \leq 0.400$ mm

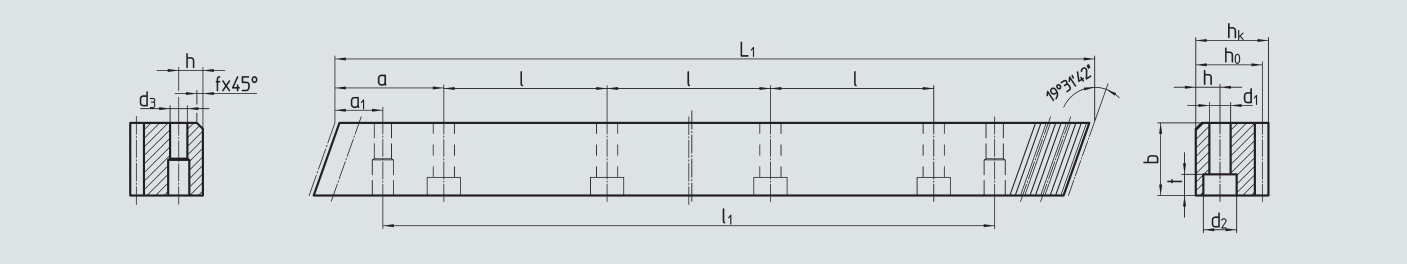
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 10



Order Code	Module	L_1	N° of Teeth	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
39 81 100	8	960.00	36	80	79	71	2.5			without mounting holes								42.50
39 81 200	8	1920.00	72	80	79	71	2.5			without mounting holes								85.00
39 11 100	10	1000.00	30	100	99	89	2.5			without mounting holes								68.72
39 13 100	12	1000.00	25	120	120	108	2.5			without mounting holes								120.00

Total Pitch Error: $GT_f/1000 \leq 0.200$ mm
$GT_f/2000 \leq 0.400$ mm

- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Backside machined, profile blasted

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

Class	ATLANTA Quality	Module	Total Pitch Error [1] (± µm/m)	Tooth Thickness Tolerance (µm)	Maximum Length (mm)	Maximum Feed Force Per Pinion Contact [2] (kN)	Application Examples
UHPR Ultra High Precision Rack	5 Hardened & Ground	2	30	-15	1005	19.5	High-precision machine tools, Laser cutting systems, CNC cutting machines
		3	30	-15	1017	28.5	
HPR High Precision Rack	6 Hardened & Ground	2	34	-20	1005	15.5	Machine tools, Waterjet/Plasma/Laser cutting machines, CNC cutting machines, Tube bending systems, Robots, Automation
		3	34	-20	1018	25.5	
		4	34	-20	1005	49.0	
	6 Hardened & Ground	2	34	-20	2011	12.5	Machine tools, Waterjet/Plasma/Laser cutting machines, CNC cutting machines, Tube bending systems, Robots, Automation
		3	34	-20	2036	23.5	
		4	34	-20	2011	42.0	
		5	34	-20	2011	62.0	
		6	34	-20	2036	89.0	
		8	34	-20	2011	155.5	
		10	34	-20	1005	234.0	
		12	34	-20	1018	333.0	
	7 Hardened & Ground	2	52	-36	1005	12.5	Woodworking/Waterjet/Plasma/Laser cutting machines, CNC cutting machines, Tube bending systems, Robots, Automation
		3	52	-36	1018	23.0	
		4	52	-36	1005	42.0	
		5	52	-36	1005	62.0	
PR Precision Rack	8 Hardened & Ground	2	60	-59	2011	12.0	Material handling, Robots, Automation
		3	60	-59	2036	22.0	
		4	60	-59	2011	39.0	
		5	60	-59	2011	57.5	
	8 Quenched & Tempered, Milled	2	100	-110	2011	7.0	Material handling, Robots, Automation
		3	100	-110	2036	12.0	
		4	100	-110	2011	23.0	
BR Basic Rack	10 Induction-Hardened Milled	1	200	-110	999	2.0	Lifting axis, Material handling, Welding robots
		1.5	200	-110	1998	3.5	
		2	200	-110	2011	7.0	
		3	200	-110	2036	16.5	
		4	200	-110	2011	29.5	
		5	200	-110	2011	45.5	
		6	200	-110	2036	63.0	
		8	200	-110	2011	110.0	
		10	200	-110	1005	166.0	
		12	200	-110	1018	252.5	

1) Values are for rack lengths of 1,000 mm. For total pitch errors values for other rack lengths, please see the respective catalog pages.

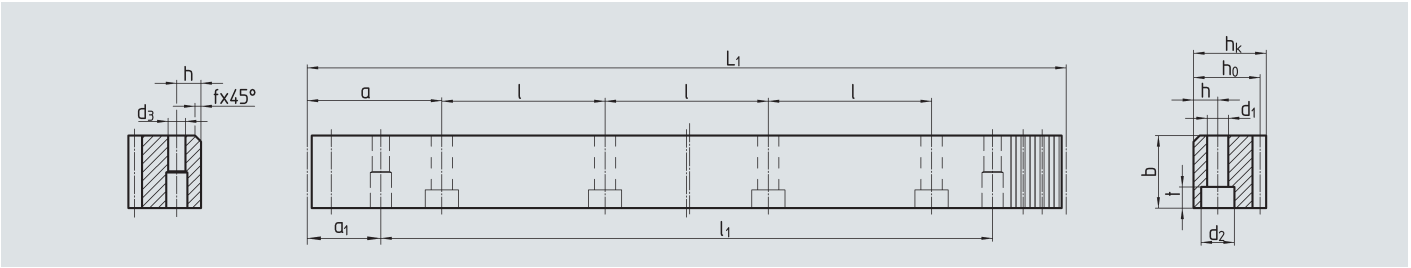
2) Values are only valid for special steel according ATLANTA-Standard.

When using the maximum capacity of the teeth, or multiple pinions in contact, the mounting screw loads must be checked separately! Please ask ATLANTA for advice!

Class & Quality			UHPR 5	HPR 6	HPR 6	HPR 7	PR 8	PR 8	BR 10
Material			Heat-Treat Steel 1)	Case-Hardened 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)	Heat-Treat Steel 1)
Heat Treatment			High-Performance Hardening	High-Performance Hardening	High-Performance Hardening	High-Performance Hardening	High-Performance Hardening	Quenched & Tempered	High-Performance Hardening
Module	Mounting Holes	Rack Lengths mm	Order Code						
1	×	1000							34 93 100
1.5	×	1000							34 16 100
		2000							34 16 200
2	✓	250		28 20 025					
		500		28 20 050				33 21 050	34 20 050
		1000	5 01 79 002	28 20 100	28 20 105	28 20 107	28 20 108	33 21 100	34 20 100
		2000			28 20 205	28 20 207	28 20 208	33 21 200	34 20 200
	×	500		28 21 050					34 21 050
		1000		28 21 100	28 21 105			33 20 100	34 21 100
		2000			28 21 205			33 20 200	34 21 200
3	✓	250		28 30 025					
		500		28 30 050				33 31 050	34 30 050
		1000	5 01 79 003	28 30 100	28 30 105	28 30 107	28 30 108	33 31 100	34 30 100
		2000			28 30 205	28 30 207	28 30 208	33 31 200	34 30 200
	×	500		28 31 050					34 31 050
		1000		28 31 100	28 31 105			33 30 100	34 31 100
		2000			28 31 205			33 30 200	34 31 200
4	✓	500		28 40 050					34 40 050
		1000		28 40 100	28 40 105			33 41 100	34 40 100
		2000			28 40 205			33 41 200	34 40 200
	✓ Large Holes	500		28 42 050					
		1000		28 42 100	28 42 105	28 40 107	28 40 108		34 42 100
		1500							34 42 150
		2000			28 42 205	28 40 207	28 40 208		34 42 200
	×	500		28 41 050					
		1000		28 41 100	28 41 105			33 40 100	34 41 100
		2000			28 41 205			33 40 200	34 41 200
5	✓	1000			28 50 105	28 50 107	28 50 108		34 50 100
		2000			28 50 205	28 50 207	28 50 208		34 50 200
	×	1000			28 51 105				34 51 100
		2000			28 51 205				34 51 200
6	✓	1000			28 60 105				34 60 100
		2000			28 60 205				34 60 200
	×	1000			28 61 105				34 61 100
		2000			28 61 205				34 61 200
8	✓	1000			28 80 105				
		2000			28 80 205				
	×	1000			28 81 105				34 81 100
		2000			28 81 205				34 81 200
10	✓	1000			28 10 105				
	×	1000			28 11 105				34 11 100
12	✓	1000			28 12 105				
	×	1000			28 13 105				34 13 100
Page			C-58	C-59	C-60	C-61	C-62	C-63	C-64

1) According to ATLANTA-Standard ✓ With mounting holes × Without mounting holes

ATLANTA Quality 5



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
501 79 002	2	1005.31	160	24	24	22	2	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	4.20
501 79 003	3	1017.88	108	29	29	26	2	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	6.00

Total Pitch Error: GT_f/ 1000 ≤ 0.030 mm

- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

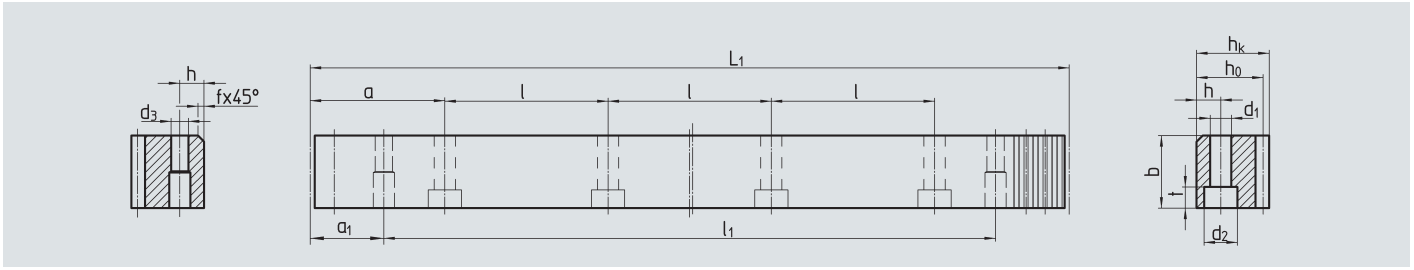
To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96.

For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D.

For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 6



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
28 20 025	2	251.30	40	24	24	22.0	2	62.8	125.66	2	8	7	11	7	31.3	188.7	5.7	1.00
28 20 050 [2]	2	502.70	80	24	24	22.0	2	62.8	125.66	4	8	7	11	7	31.3	440.1	5.7	2.10
28 21 050	2	502.70	80	24	24	22.0	2	without mounting holes										2.10
28 20 100	2	1005.30	160	24	24	22.0	2	62.8	125.66	8	8	7	11	7	31.4	942.7	5.7	4.20
28 21 100	2	1005.30	160	24	24	22.0	2	without mounting holes										4.20
28 30 025	3	254.50	27	29	29	26.0	2	63.6	127.23	2	9	10	15	9	34.4	185.7	7.7	1.50
28 30 050 [2]	3	508.90	54	29	29	26.0	2	63.6	127.23	4	9	10	15	9	34.4	440.1	7.7	3.00
28 31 050	3	508.90	54	29	29	26.0	2	without mounting holes										3.00
28 30 100	3	1017.90	108	29	29	26.0	2	63.6	127.23	8	9	10	15	9	34.4	949.1	7.7	6.00
28 31 100	3	1017.90	108	29	29	26.0	2	without mounting holes										6.00
28 40 050 [2]	4	502.70	40	39	39	35.0	2	62.8	125.66	4	12	10	15	9	37.5	427.7	7.7	5.30
28 41 050	4	502.70	40	39	39	35.0	2	without mounting holes										5.30
28 42 050	4	502.40	40	39	39	35.0	2	62.8	125.66	4	12	14	15	9	37.5	427.7	7.7	5.30
28 40 100	4	1005.30	80	39	39	35.0	2	62.8	125.66	8	12	10	15	9	37.5	930.3	7.7	10.50
28 41 100	4	1005.30	80	39	39	35.0	2	without mounting holes										10.50
28 42 100	4	1005.30	80	39	39	35.0	2	62.8	125.66	8	12	14	20	13	37.5	930.3	11.7	10.50

2) Due to the screw connection, the feed force is max. 50 % of the value for racks with L_1 = 1,000 mm

Total Pitch Error: **GT_f/ 250 ≤ 0.020 mm**
GT_f/ 500 ≤ 0.026 mm
GT_f/1000 ≤ 0.034 mm

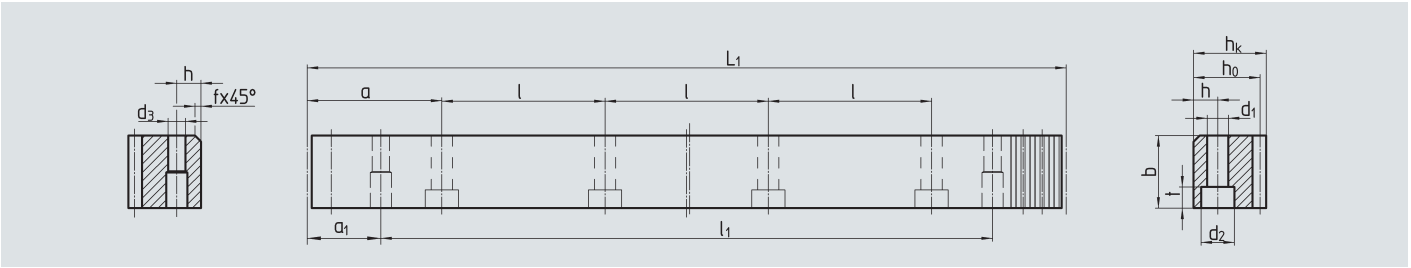
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 6



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
28 20 105	2	1005.30	160	24	24	22.0	2	62.8	125.66	8	8	7	11	7	31.4	942.70	5.7	4.20
28 21 105	2	1005.30	160	24	24	22.0	2			without mounting holes								4.20
28 20 205	2	2010.62	320	24	24	22.0	2	62.8	125.66	16	8	7	11	7	31.4	1948.00	5.7	8.40
28 21 205	2	2010.62	320	24	24	22.0	2			without mounting holes								8.40
28 30 105	3	1017.90	108	29	29	26.0	2	63.6	127.23	8	9	10	15	9	34.4	949.10	7.7	6.00
28 31 105	3	1017.90	108	29	29	26.0	2			without mounting holes								6.00
28 30 205	3	2035.75	216	29	29	26.0	2	63.6	127.23	16	9	10	15	9	34.4	1967.00	7.7	12.00
28 31 205	3	2035.75	216	29	29	26.0	2			without mounting holes								12.00
28 40 105	4	1005.30	80	39	39	35.0	2	62.8	125.66	8	12	10	15	9	37.5	930.30	7.7	10.50
28 41 105	4	1005.30	80	39	39	35.0	2			without mounting holes								10.50
28 42 105	4	1005.30	80	39	39	35.0	2	62.8	125.66	8	12	14	20	13	37.5	930.30	11.7	10.50
28 40 205	4	2010.62	160	39	39	35.0	2	62.8	125.66	16	12	10	15	9	37.5	1935.60	7.7	21.00
28 41 205	4	2010.62	160	39	39	35.0	2			without mounting holes								21.00
28 42 205	4	2010.62	160	39	39	35.0	2	62.8	125.66	16	12	14	20	13	37.5	1935.60	11.7	21.00
28 50 105	5	1005.30	64	49	39	34	2.5	62.8	125.66	8	12	14	20	13	30.1	945.00	11.7	13.40
28 51 105	5	1005.30	64	49	39	34	2.5			without mounting holes								13.40
28 50 205	5	2010.62	128	49	39	34	2.5	62.8	125.66	16	12	14	20	13	30.1	1950.40	11.7	26.80
28 51 205	5	2010.62	128	49	39	34	2.5			without mounting holes								26.80
28 60 105	6	1017.88	54	59	49	43	2.5	63.6	127.23	8	16	18	26	17	31.4	955.00	15.7	18.50
28 61 205	6	1017.88	54	59	49	43	2.5			without mounting holes								18.50
28 60 205	6	2035.75	108	59	49	43	2.5	63.6	127.23	16	16	18	26	17	31.4	1973.00	15.7	37.00
28 61 205	6	2035.75	108	59	49	43	2.5			without mounting holes								37.00
28 80 105	8	1005.30	40	79	79	71	2.5	62.8	125.66	8	25	22	33	21	26.6	952.00	19.7	44.76
28 81 105	8	1005.30	40	79	79	71	2.5			without mounting holes								44.76
28 80 205	8	2010.61	80	79	79	71	2.5	62.8	125.66	16	25	22	33	21	26.6	1957.30	19.7	89.50
28 81 205	8	2010.61	80	79	79	71	2.5			without mounting holes								89.50
28 10 105 [1]	10	1005.30	32	99	99	89	2.5	62.83	125.66	8	32	33	48	32	125.66	753.96	19.7	68.72
28 11 105 [1]	10	1005.30	32	99	99	89	2.5			without mounting holes								68.72
28 12 105 [1]	12	1017.90	27	120	120	108	2.5	63.60	127.23	8	40	39	58	38	127.23	763.40	19.7	111.00
28 13 105 [1]	12	1017.90	27	120	120	108	2.5			without mounting holes								120.00

1) On request

Other lengths available on request

Total Pitch Error: $GT_f/1000 \leq 0.034$ mm
$GT_f/1500 \leq 0.041$ mm (≙ 0.027 mm / 1000)
$GT_f/2000 \leq 0.044$ mm (≙ 0.022 mm / 1000)

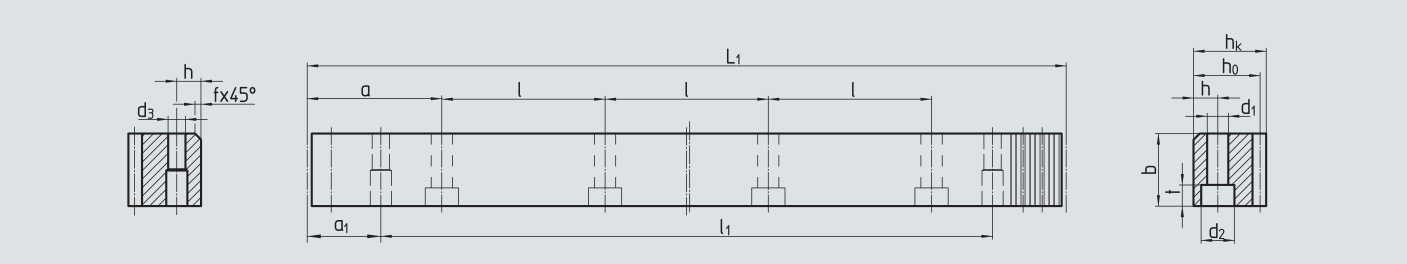
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 7



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
28 20 107	2	1005.30	160	24	24	22	2	62.8	125.66	8	8	7	11	7	31.4	942.7	5.7	4.20
28 20 207	2	2010.60	320	24	24	22	2	62.8	125.66	16	8	7	11	7	31.4	1948.0	5.7	8.40
28 30 107	3	1017.90	108	29	29	26	2	63.6	127.23	8	9	10	15	9	34.4	949.1	7.7	6.00
28 30 207	3	2035.70	216	29	29	26	2	63.6	127.23	16	9	10	15	9	34.4	1967.0	7.7	12.00
28 40 107	4	1005.30	80	39	39	35	2	62.8	125.66	8	12	14	20	13	37.5	930.3	11.7	10.50
28 40 207	4	2010.60	160	39	39	35	2	62.8	125.66	16	12	14	20	13	37.5	1935.6	11.7	21.00
28 50 107	5	1005.30	64	49	39	34	2.5	62.8	125.66	8	12	14	20	13	30.1	945.0	11.7	13.40
28 50 207	5	2010.60	128	49	39	34	2.5	62.8	125.66	16	12	14	20	13	30.1	1950.4	11.7	26.80

Other lengths and without mounting holes available on request

Total Pitch Error: **$GT_f/1000 \leq 0.052$ mm**
$GT_f/2000 \leq 0.068$ mm ($\triangleq$ 0.034 mm / 1000)

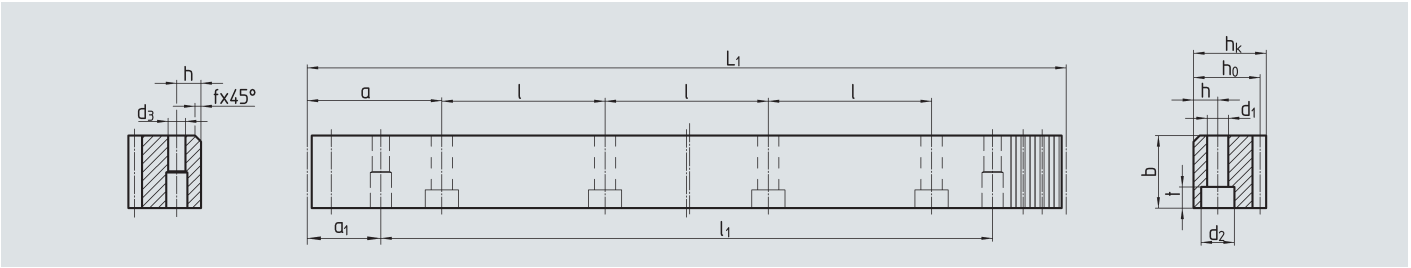
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 8



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
28 20 108	2	1005.30	160	24	24	22	2	62.8	125.66	8	8	7	11	7	31.3	942.7	5.7	4.20
28 20 208	2	2010.62	320	24	24	22	2	62.8	125.66	16	8	7	11	7	31.3	1948.0	5.7	8.40
28 30 108	3	1017.90	108	29	29	26	2	63.6	127.23	8	9	10	15	9	34.4	949.1	7.7	6.00
28 30 208	3	2035.75	216	29	29	26	2	63.6	127.23	16	9	10	15	9	34.4	1967.0	7.7	12.00
28 40 108	4	1005.30	80	39	39	35	2	62.8	125.66	8	12	14	20	13	37.5	930.3	11.7	10.50
28 40 208	4	2010.62	160	39	39	35	2	62.8	125.66	16	12	14	20	13	37.5	1935.6	11.7	21.00
28 50 108	5	1005.30	64	49	39	34	2.5	62.8	125.66	8	12	14	20	13	30.2	945.0	11.7	13.40
28 50 208	5	2010.62	128	49	39	34	2.5	62.8	125.66	16	12	14	20	13	30.2	1950.4	11.7	26.80

Other lengths and without mounting holes available on request

Total Pitch Error: $GT_f/1000 \leq 0.060$ mm
$GT_f/2000 \leq 0.078$ mm (≙ 0.039 mm / 1000)

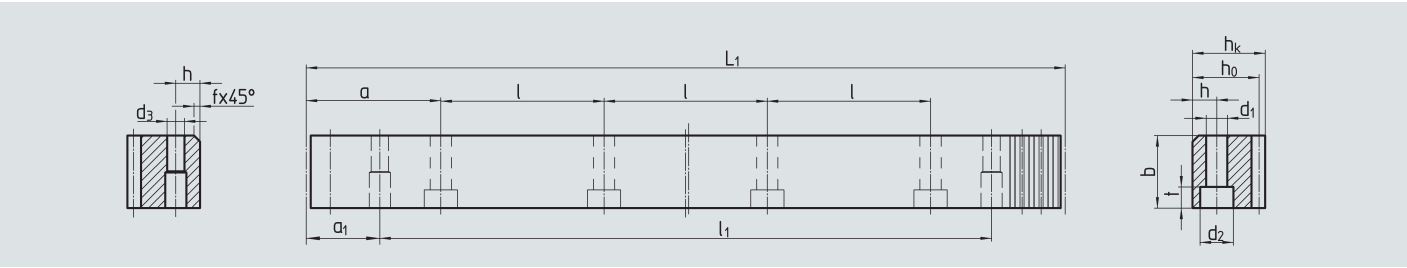
- Teeth hardened with the ATLANTA High-Performance hardening process and ground
- Heat-treatable steel according to ATLANTA-Standard
- Ground on all sides after hardening

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 8



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
33 21 050 [2]	2	502.65	80	25	24	22	2	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	2.20
33 21 100	2	1005.31	160	25	24	22	2	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	4.30
33 20 100	2	1005.31	160	25	24	22	2	without mounting holes										4.30
33 21 200	2	2010.62	320	25	24	22	2	62.83	125.66	16	8	7	11	7	31.3	1948.0	5.7	8.60
33 20 200	2	2010.62	320	25	24	22	2	without mounting holes										8.60
33 31 050 [2]	3	508.94	54	30	29	26	2	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	3.10
33 31 100	3	1017.88	108	30	29	26	2	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	6.20
33 30 100	3	1017.88	108	30	29	26	2	without mounting holes										6.20
33 31 200	3	2035.75	216	30	29	26	2	63.62	127.23	16	9	10	15	9	34.4	1967.0	7.7	12.40
33 30 200	3	2035.75	216	30	29	26	2	without mounting holes										12.40
33 41 100	4	1005.31	80	40	39	35	2	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	11.00
33 40 100	4	1005.31	80	40	39	35	2	without mounting holes										11.00
33 41 200	4	2010.62	160	40	39	35	2	62.83	125.66	16	12	10	15	9	37.5	1935.6	7.7	22.00
33 40 200	4	2010.62	160	40	39	35	2	without mounting holes										22.00

2) Due to the screw connection, the feed force is max. 50 % of the value for racks with L_1 = 1,000 mm

Total Pitch Error: GT_f / 500 ≤ 0.050 mm
GT_f /1000 ≤ 0.100 mm
GT_f /2000 ≤ 0.200 mm

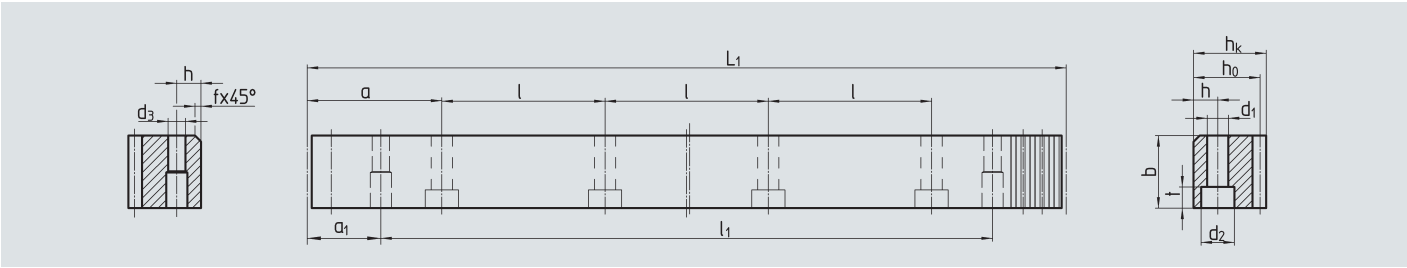
- Teeth quenched & tempered, milled
- Heat-treatable steel according to ATLANTA-Standard
- Bright steel, backside machined

For information on mounting racks, see page C-92.

To achieve precision rack joints, we recommend our patented rack assembly kit, see page C-96. For lubrication of racks & pinions, we recommend our electronic lubrication systems, see Chapter D. For the calculation and selection of the rack & pinion drive, see pages C-44 to C-55.

For screws for rack mounting, see page C- 95.

ATLANTA Quality 10



Order Code	Module	L_1	N° of Teeth z	$b^{+0.4}$	h_k	h_0	f	a	l	N° of Holes	h	d_1	d_2	t	a_1	l_1	d_3	kg
34 93 100	1	999.06	318	15	15	14	2			without mounting holes								1.64
34 16 100	1.5	999.03	212	17	17	15.5	2			without mounting holes								2.06
34 16 200	1.5	1998.05	424	17	17	15.5	2			without mounting holes								4.12
34 20 050 [2]	2	502.65	80	25	24	22	2	62.83	125.66	4	8	7	11	7	31.3	440.1	5.7	2.10
34 21 050	2	502.65	80	25	24	22	2			without mounting holes								2.10
34 20 100	2	1005.31	160	25	24	22	2	62.83	125.66	8	8	7	11	7	31.3	942.7	5.7	4.20
34 21 100	2	1005.31	160	25	24	22	2			without mounting holes								4.20
34 20 200	2	2010.62	320	25	24	22	2	62.83	125.66	16	8	7	11	7	31.3	1948.0	5.7	8.40
34 21 200	2	2010.62	320	25	24	22	2			without mounting holes								8.40
34 30 050	3	508.94	54	30	29	26	2	63.62	127.23	4	9	10	15	9	34.4	440.1	7.7	3.00
34 31 050	3	508.94	54	30	29	26	2			without mounting holes								3.00
34 30 100	3	1017.88	108	30	29	26	2	63.62	127.23	8	9	10	15	9	34.4	949.1	7.7	6.00
34 31 100	3	1017.88	108	30	29	26	2			without mounting holes								6.00
34 30 200	3	2035.75	216	30	29	26	2	63.62	127.23	16	9	10	15	9	34.4	1967	7.7	12.00
34 31 200	3	2035.75	216	30	29	26	2			without mounting holes								12.00
34 40 050 [2]	4	502.65	40	40	39	35	2	62.83	125.66	4	12	10	15	9	37.5	427.7	7.7	5.30
34 40 100	4	1005.31	80	40	39	35	2	62.83	125.66	8	12	10	15	9	37.5	930.3	7.7	10.20
34 41 100	4	1005.31	80	40	39	35	2			without mounting holes								10.20
34 42 100	4	1005.31	80	40	39	35	2	62.83	125.66	8	12	14	20	13	37.5	930.3	11.7	10.20
34 42 150	4	1507.96	120	40	39	35	2	62.83	125.66	12	12	14	20	13	37.5	1432.9	11.7	15.80
34 40 200	4	2010.62	160	40	39	35	2	62.83	125.66	16	12	10	15	9	37.5	1935.6	7.7	20.50
34 41 200	4	2010.62	160	40	39	35	2			without mounting holes								20.50
34 42 200	4	2010.62	160	40	39	35	2	62.83	125.66	16	12	14	20	13	37.5	1935.6	11.7	20.50
34 50 100	5	1005.31	64	50	39	34	2.5	62.83	125.66	8	12	14	20	13	30.2	945.0	11.7	13.80
34 51 100	5	1005.31	64	50	39	34	2.5			without mounting holes								13.80
34 50 200	5	2010.62	128	50	39	34	2.5	62.83	125.66	16	12	14	20	13	30.2	1950.3	11.7	27.50
34 51 200	5	2010.62	128	50	39	34	2.5			without mounting holes								27.50
34 60 100	6	1017.88	54	60	49	43	2.5	63.62	127.23	8	16	18	26	17	31.4	955.0	15.7	21.00
34 61 100	6	1017.88	54	60	49	43	2.5			without mounting holes								21.00
34 60 200	6	2035.75	108	60	49	43	2.5	63.62	127.23	16	16	18	26	17	31.4	1972.9	15.7	42.00
34 61 200	6	2035.75	108	60	49	43	2.5			without mounting holes								42.00
34 81 100	8	1005.31	40	80	79	71	2.5			without mounting holes								44.63
34 81 200	8	2010.61	80	80	79	71	2.5			without mounting holes								82.26
34 11 100	10	1005.30	32	100	99	89	2.5			without mounting holes								70.60
34 13 100	12	1017.88	27	120	120	108	2.5			without mounting holes								110.00

2) Due to the screw connection, the feed force is max. 50 % of the value for racks with L_1 = 1,000 mm

Total Pitch Error: GT_f/ 500 ≤ 0.100 mm
GT_f/1000 ≤ 0.200 mm
GT_f/1500 ≤ 0.300 mm
GT_f/2000 ≤ 0.400 mm

- Teeth hardened with the ATLANTA high preformance hardening process
- Heat-treatable steel according to ATLANTA-Standard
- Bright steel

For further information, see previous page.