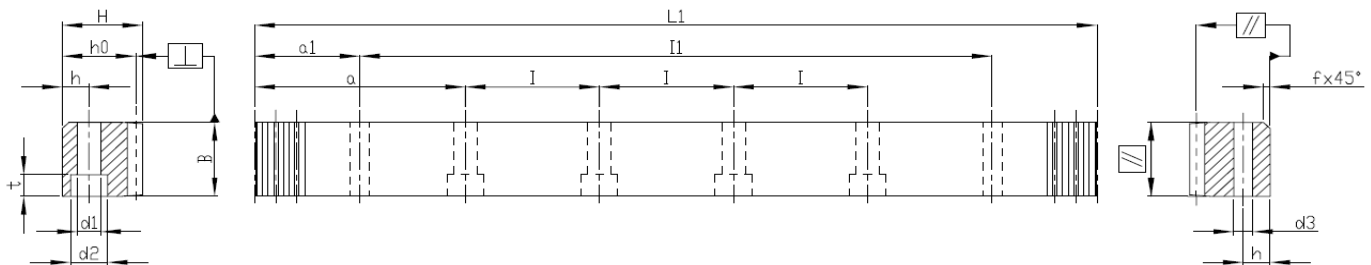


Rack with Straight Teeth

Quality 4 / Carbon Steel
 Tooth Thickness Tolerance : $-13 \sim 0 \mu\text{m}$
 Straight Teeth
 Teeth Induction Hardened and Ground
 All Sides Ground



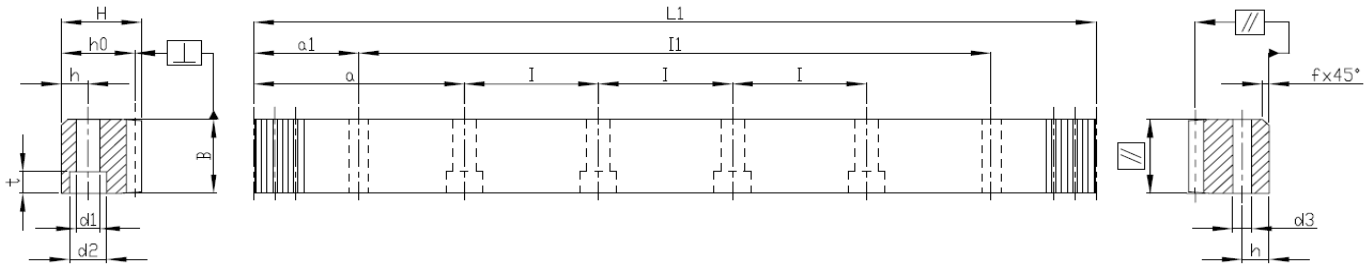
Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	h ₀	f	a	I	Hole No.	h	d1	d2	t	a1	II	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code *
5	15.70796	1005.31	64	49	39	34	3	62.83	125.66	8	12	14	20	13	30.10	945.11	11.7	0.005	0.02	05041100C10
6	18.84956	1017.88	54	59	49	43	3	63.62	127.23	8	16	18	26	17	31.40	955.08	15.7	0.005	0.02	06041100C10
8	25.13274	1005.31	40	79	79	71	3	62.83	125.66	8	25	22	33	21	26.60	952.11	19.7	0.006	0.022	08041100C10
10	31.41593	1005.31	32	99	99	89	3	62.83	125.66	8	32	33	48	32	125.66	753.99	19.7	0.006	0.022	10041100C10
12	37.69911	1017.88	27	120	120	108	3	63.62	127.23	8	40	39	58	38	127.23	763.42	19.7	0.007	0.023	12041100C10

(1) Teeth Pitch $Pt = \text{Module} \times \pi$ (2) $f_p = \text{Single Pitch Error}$ (3) $F_p = \text{Total Pitch Error}$

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Rack with Straight Teeth

Quality 5H / Alloy Steel
 Tooth Thickness Tolerance : $-15 \sim 0 \mu\text{m}$
 Straight Teeth
 Material Case-Hardened
 Teeth Ground and all Sides Ground

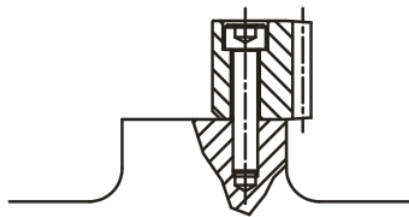


Mn	Pt ⁽¹⁾	LI	Teeth No.	B	H	ho	f	a	I	Hole No.	h	d1	d2	t	a1	II	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code *
2	6.28319	1005.31	160	24	24	22	2	62.83	125.66	8	9	10	15	9	31.30	942.70	7.7	0.006	0.024	025HI100M10
3	9.42478	1017.88	108	29	29	26	2	63.62	127.23	8	10	12	17.5	11	28.60	960.60	11.7	0.006	0.026	035HI100M10
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	13	16	23	15	30.30	944.70	15.7	0.007	0.028	045HI100M10
5	15.70796	1005.31	64	49	49	44	3	62.83	125.66	8	15	18	26	17	34.80	935.70	15.7	0.007	0.028	055HI100M10
6	18.84956	1017.88	54	59	59	53	3	63.62	127.23	8	20	22	33	21	98.60	820.60	19.7	0.007	0.028	065HI100M10
8	25.13274	1005.31	40	79	79	71	3	62.83	125.66	8	25	26	39	25	26.60	952.11	19.7	0.008	0.031	085HI100M10
10	31.41593	1005.31	32	99	99	89	3	62.83	125.66	8	32	39	58	38	125.66	753.99	19.7	0.008	0.031	105HI100M10

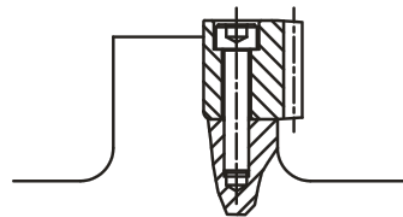
(1) Teeth Pitch Pt = Module $\times \pi$ (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "I" to "0". Please also refer to page 14.

Especially for the application without back-support.

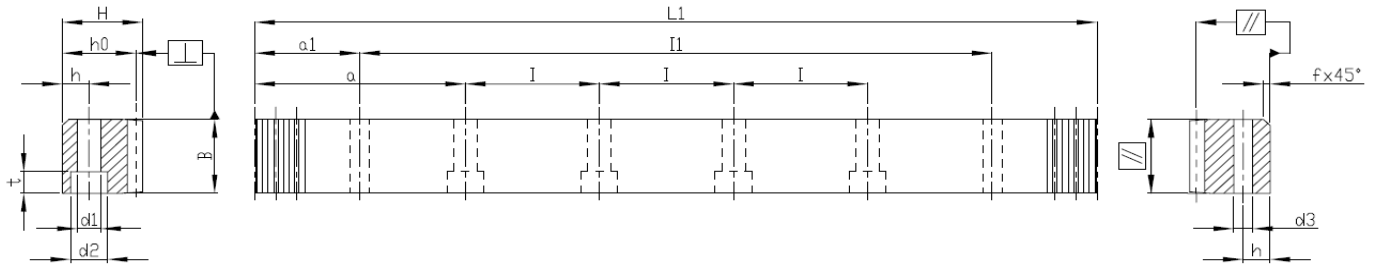


Without alignment / back-support



With alignment / back-support

Quality 5 / Alloy Steel
 Tooth Thickness Tolerance : -15 ~ 0 μm
 Straight Teeth
 Material Carburized, Induction Hardened
 Teeth Ground and all Sides Ground



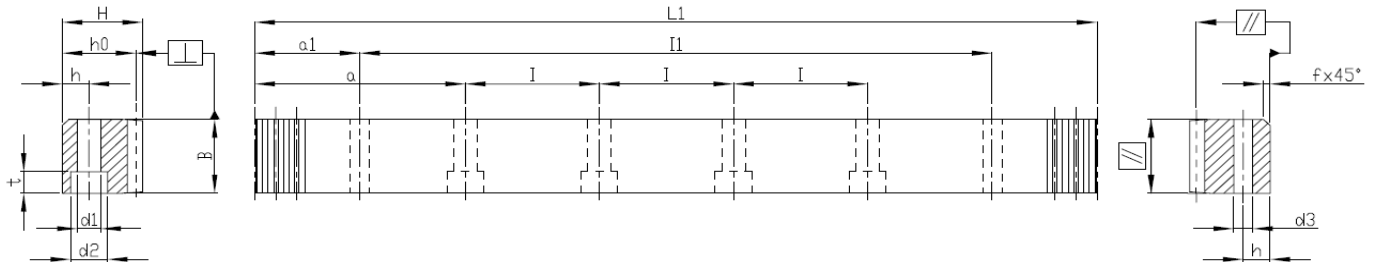
Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	ho	f	a	I	Hole No.	h	d1	D2	T	a1	I1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code*
2	6.28319	251.33	40	24	24	22	2	62.83	125.66	2	8	7	11	7	31.3	188.73	5.7	0.005	0.018	02051025M10
2	6.28319	502.66	80	24	24	22	2	62.83	125.66	4	8	7	11	7	31.3	440.06	5.7	0.006	0.021	02051050M10
2	6.28319	1005.31	160	24	24	22	2	62.83	125.66	8	8	7	11	7	31.3	942.71	5.7	0.006	0.024	02051100M10
3	9.42478	254.47	27	29	29	26	2	63.62	127.23	2	9	10	15	9	34.4	185.67	7.7	0.006	0.019	03051025M10
3	9.42478	508.94	54	29	29	26	2	63.62	127.23	4	9	10	15	9	34.4	440.14	7.7	0.006	0.023	03051050M10
3	9.42478	1017.88	108	29	29	26	2	63.62	127.23	8	9	10	15	9	34.4	949.08	7.7	0.006	0.026	03051100M10

(1) Teeth Pitch Pt = Module $\times \pi$ (2) fp = Single Pitch Error (3) Fp = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Rack with Straight Teeth

Quality 5 / Carbon Steel
 Tooth Thickness Tolerance : -15 ~ 0 μm
 Straight Teeth
 Teeth Induction Hardened and Ground
 All Sides Ground

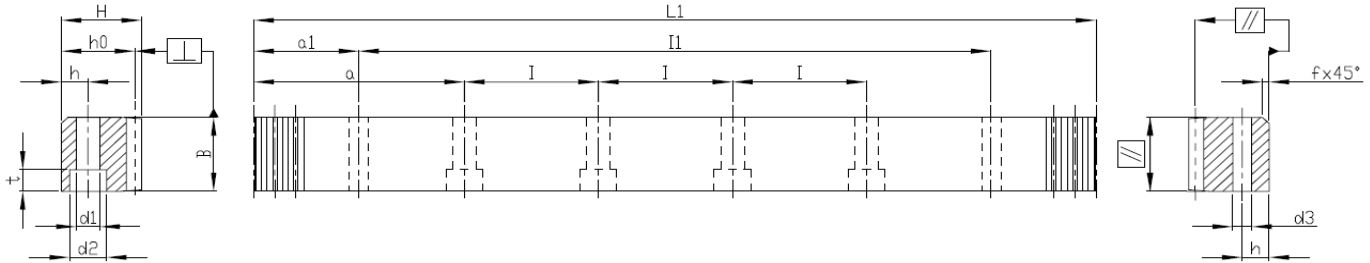


Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	ho	f	a	l	Hole No.	h	d1	d2	t	a1	l1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code*
4	12.56637	251.33	20	39	39	35	3	62.83	125.66	2	12	10	15	9	37.5	176.33	7.7	0.006	0.021	04051025C10
4	12.56637	502.66	40	39	39	35	3	62.83	125.66	4	12	10	15	9	37.5	427.66	7.7	0.007	0.026	04051050C10
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	12	10	15	9	37.5	930.31	7.7	0.007	0.028	04051100C10
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	12	14	20	13	37.5	930.31	11.7	0.007	0.028	04051100CS0
4	12.56637	1507.96	120	39	39	35	3	62.83	125.66	12	12	10	15	9	37.5	1432.96	7.7	0.007	0.028	04051150C10
4	12.56637	1507.96	120	39	39	35	3	62.83	125.66	12	12	14	20	13	37.5	1432.96	11.7	0.007	0.028	04051150CS0
4	12.56637	2010.62	160	39	39	35	3	62.83	125.66	16	12	10	15	9	37.5	1935.62	7.7	0.008	0.032	04051200C10
4	12.56637	2010.62	160	39	39	35	3	62.83	125.66	16	12	14	20	13	37.5	1935.62	11.7	0.008	0.032	04051200CS0
5	15.70796	1005.31	64	49	39	34	3	62.83	125.66	8	12	14	20	13	30.1	945.11	11.7	0.007	0.028	05051100C10
6	18.84956	1017.88	54	59	49	43	3	63.62	127.23	8	16	18	26	17	31.4	955.08	15.7	0.007	0.028	06051100C10
8	25.13274	1005.31	40	79	79	71	3	62.83	125.66	8	25	22	33	21	26.6	952.11	19.7	0.008	0.031	08051100C10
10	31.41593	1005.31	32	99	99	89	3	62.83	125.66	8	32	33	48	32	125.66	753.99	19.7	0.008	0.031	10051100C10
12	37.69911	1017.88	27	120	120	108	3	63.62	127.23	8	40	39	58	38	127.23	763.42	19.7	0.01	0.033	12051100C10

(1) Teeth Pitch $P_t = \text{Module} \times \pi$ (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Quality 6 / Carbon Steel
 Tooth Thickness Tolerance : -22 ~ 0 μm
 Straight Teeth
 Teeth Induction Hardened and Ground
 All Sides Ground



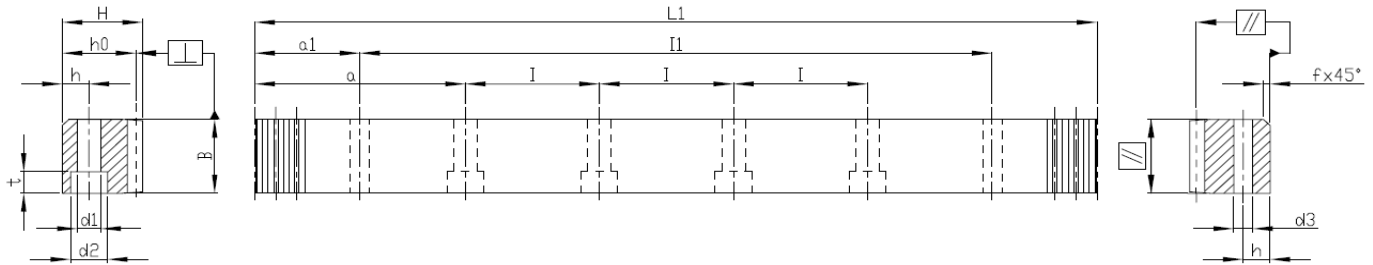
Mn	Pt ⁽¹⁾	LI	Teeth No.	B	H	ho	f	a	l	Hole No.	h	d1	d2	t	a1	l1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code*
1	3.14159	502.66	160	15	15	14	2	62.85	125.66	4	6	5	8	5	31.30	440.05	5.7	0.008	0.029	01061050C10
1	3.14159	1005.31	320	15	15	14	2	62.85	125.66	8	6	5	8	5	31.30	942.71	5.7	0.008	0.033	01061100C10
1	3.14159	1507.96	480	15	15	14	2	62.85	125.66	12	6	5	8	5	31.30	1445.36	5.7	0.008	0.033	01061150C10
2	6.28319	502.66	80	24	24	22	2	62.83	125.66	4	8	7	11	7	31.30	440.06	5.7	0.008	0.029	02061050C10
2	6.28319	1005.31	160	24	24	22	2	62.83	125.66	8	8	7	11	7	31.30	942.71	5.7	0.008	0.034	02061100C10
2	6.28319	2010.62	320	24	24	22	2	62.83	125.66	16	8	7	11	7	31.30	1948.02	5.7	0.009	0.038	02061200C10
3	9.42478	508.94	108	29	29	26	2	63.62	127.23	4	9	10	15	9	34.40	440.14	7.7	0.008	0.032	03061050C10
3	9.42478	1017.88	108	29	29	26	2	63.62	127.23	8	9	10	15	9	34.40	949.08	7.7	0.009	0.037	03061100C10
3	9.42478	2035.75	216	29	29	26	2	63.62	127.23	16	9	10	15	9	34.40	1966.952	7.7	0.010	0.042	03061200C10
4	12.56637	502.66	40	39	39	35	3	62.83	125.66	4	12	10	15	9	37.50	427.66	7.7	0.009	0.034	04061050C10
4	12.56637	502.66	40	39	39	35	3	62.83	125.66	4	12	14	20	13	37.50	427.66	11.7	0.009	0.034	04061050CS0
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	12	10	15	9	37.50	930.31	7.7	0.010	0.040	04061100C10
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	12	14	20	13	37.50	930.31	11.7	0.010	0.040	04061100CS0
4	12.56637	1507.96	120	39	39	35	3	62.83	125.66	12	12	14	20	13	37.50	1432.96	11.7	0.010	0.040	04061150CS0
4	12.56637	2010.62	160	39	39	35	3	62.83	125.66	16	12	10	15	9	37.50	1935.62	7.7	0.011	0.045	04061200C10
4	12.56637	2010.62	160	39	39	35	3	62.83	125.66	16	12	14	20	13	37.50	1935.62	11.7	0.011	0.045	04061200CS0
5	15.70796	502.66	32	49	39	34	3	62.83	125.66	4	12	14	20	13	30.10	442.46	11.7	0.009	0.034	05061050C10
5	15.70796	1005.31	64	49	39	34	3	62.83	125.66	8	12	14	20	13	30.10	945.11	11.7	0.010	0.040	05061100C10
5	15.70796	1507.96	96	49	39	34	3	62.83	125.66	12	12	14	20	13	30.10	1447.76	11.7	0.010	0.040	05061150C10
5	15.70796	2010.62	128	49	39	34	3	62.83	125.66	16	12	14	20	13	30.10	1950.42	11.7	0.011	0.045	05061200C10
6	18.84956	508.94	27	59	49	43	3	63.62	127.23	4	16	18	26	17	31.40	446.14	15.7	0.009	0.034	06061050C10
6	18.84956	1017.88	54	59	49	43	3	63.62	127.23	8	16	18	26	17	31.40	955.08	15.7	0.010	0.040	06061100C10
6	18.84956	1526.81	81	59	49	43	3	63.62	127.23	12	16	18	26	17	31.40	1464.01	15.7	0.010	0.040	06061150C10
6	18.84956	2035.75	108	59	49	43	3	63.62	127.23	16	16	18	26	17	31.40	1972.95	15.7	0.011	0.045	06061200C10
8	25.13274	502.66	20	79	79	71	3	62.83	125.66	4	25	22	33	21	26.60	449.46	19.7	0.011	0.037	08061050C10
8	25.13274	1005.31	40	79	79	71	3	62.83	125.66	8	25	22	33	21	26.60	952.11	19.7	0.011	0.043	08061100C10
8	25.13274	2010.62	80	79	79	71	3	62.83	125.66	16	25	22	33	21	26.60	1957.42	19.7	0.012	0.048	08061200C10
10	31.41593	1005.31	32	99	99	89	3	62.83	125.66	8	32	33	48	32	125.66	753.99	19.7	0.011	0.043	10061100C10
12	37.69911	1017.88	27	120	120	108	3	63.62	127.23	8	40	39	58	38	127.23	763.42	19.7	0.013	0.046	12061100C10

(1) Teeth Pitch Pt = Module x π (2) fp = Single Pitch Error (3) Fp = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "I" to "O". Please also refer to page 14.

Rack with Straight Teeth

Quality 6M / Carbon Steel
 Tooth Thickness Tolerance : -22 ~ 0 μm
 Straight Teeth
 Teeth Induction Hardened and Ground
 All Sides Milled

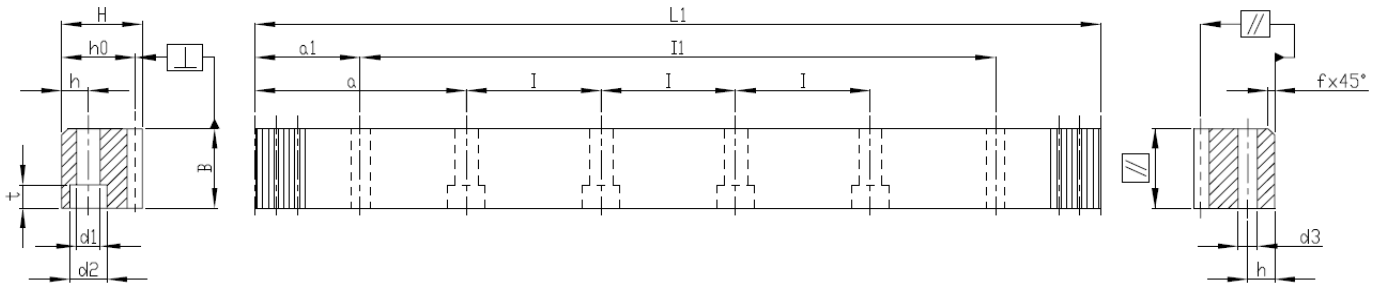


Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	h ₀	f	a	l	Hole No.	h	d1	d2	t	a1	l1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code *
2	6.28319	502.66	80	24	24	22	2	62.83	125.66	4	8	7	11	7	31.3	440.06	5.7	0.008	0.029	026M11050C10
2	6.28319	1005.31	160	24	24	22	2	62.83	125.66	8	8	7	11	7	31.3	942.71	5.7	0.008	0.034	026M11100C10
3	9.42478	508.94	54	29	29	26	2	63.62	127.23	4	9	10	15	9	34.4	440.14	7.7	0.008	0.032	036M11050C10
3	9.42478	1017.88	108	29	29	26	2	63.62	127.23	8	9	10	15	9	34.4	949.08	7.7	0.009	0.037	036M11100C10
4	12.56637	502.66	40	39	39	35	3	62.83	125.66	4	12	10	15	9	37.5	427.66	7.7	0.009	0.034	046M11050C10
4	12.56637	502.66	40	39	39	35	3	62.83	125.66	4	12	14	20	13	37.5	427.66	11.7	0.009	0.034	046M11050CS0
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	12	10	15	9	37.5	930.31	7.7	0.01	0.04	046M11100C10
4	12.56637	1005.31	80	39	39	35	3	62.83	125.66	8	12	14	20	13	37.5	930.31	11.7	0.01	0.04	046M11100CS0
5	15.70796	502.66	32	49	49	43	3	62.83	125.66	4	12	14	20	13	30.1	442.46	11.7	0.009	0.034	056M11050C10
5	15.70796	1005.31	64	49	49	43	3	62.83	125.66	8	12	14	20	13	30.1	945.11	11.7	0.01	0.04	056M11100C10
6	18.84956	508.94	27	59	59	43	3	63.62	127.23	4	16	18	26	17	31.4	446.14	15.7	0.009	0.034	066M11050C10
6	18.84956	1017.88	54	59	59	43	3	63.62	127.23	8	16	18	26	17	31.4	955.08	15.7	0.01	0.04	066M11100C10
8	25.13274	1005.31	40	79	79	71	3	62.83	125.66	8	25	22	33	21	26.6	952.11	19.7	0.011	0.043	086M11100C10

(1) Teeth Pitch Pt = Module × π (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Quality 8H / Q&T Alloy Steel
 Tooth Thickness Tolerance : $-48 \sim 0 \mu\text{m}$
 Straight Teeth
 Material Quenched and Tempered
 Teeth Milled / All Sides Milled

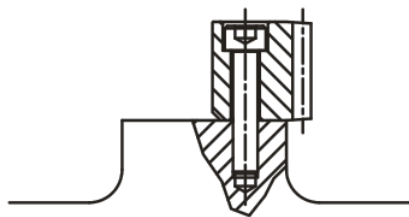


Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	h ₀	f	a	I	Hole No.	h	d1	d2	t	a1	II	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code*
2	6.28319	1005.31	160	25	24	22	2	62.83	125.66	8	8	7	11	7	31.3	942.71	5.7	0.016	0.066	028H1100Q10
2	6.28319	2010.62	320	25	24	22	2	62.83	125.66	16	8	7	11	7	31.3	1948.02	5.7	0.018	0.074	028H1200Q10
3	9.42478	1017.88	108	30	29	26	2	63.62	127.23	8	9	10	15	9	34.4	949.08	7.7	0.018	0.072	038H1100Q10
3	9.42478	2035.75	216	30	29	26	2	63.62	127.23	16	9	10	15	9	34.4	1966.952	7.7	0.019	0.081	038H1200Q10
4	12.56637	1005.31	80	40	39	35	3	62.83	125.66	8	12	10	15	9	37.5	930.31	7.7	0.019	0.078	048H1100Q10
4	12.56637	2010.62	160	40	39	35	3	62.83	125.66	16	12	10	15	9	37.5	1935.62	7.7	0.021	0.088	048H1200Q10

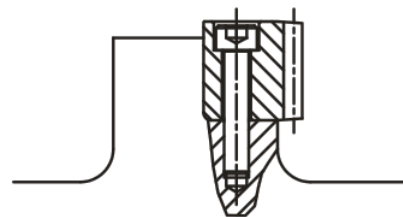
(1) Teeth Pitch $P_t = \text{Module} \times \pi$ (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Especially for the application without back-support.



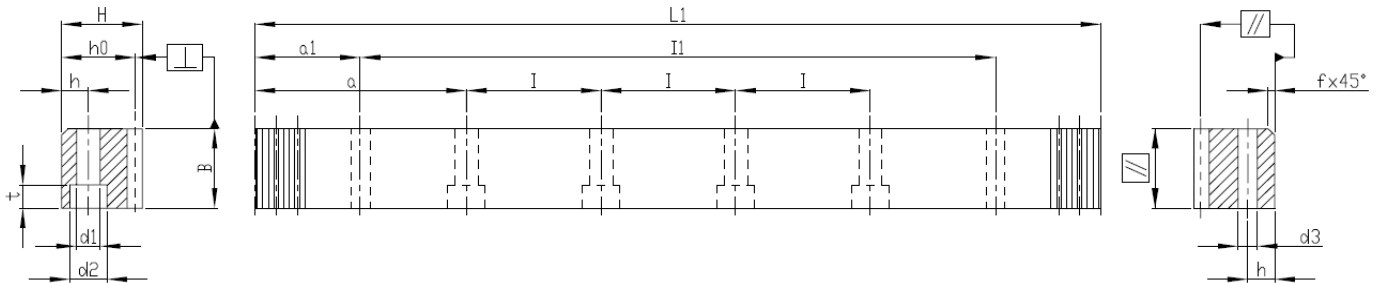
Without alignment / back-support



With alignment / back-support

Rack with Straight Teeth

Quality 8 / Carbon Steel
 Tooth Thickness Tolerance : -48 ~ 0 μm
 Straight Teeth
 Normalized, Teeth Milled
 All Sides Milled

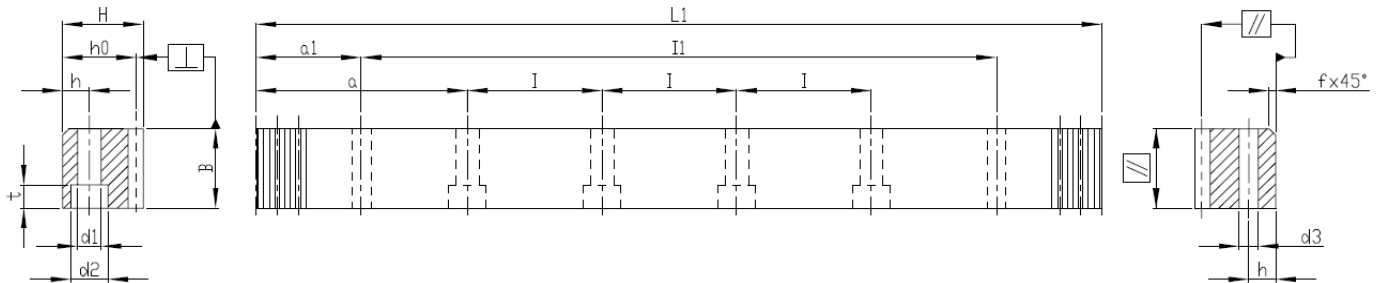


Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	h ₀	f	a	l	Hole No.	h	d1	d2	t	a1	l1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code *
1	3.14159	999.03	318	15	15	14.0	2	62.44	124.88	8	6	5	8	5	31.30	936.43	5.7	0.016	0.065	01081100C10
1	3.14159	1998.05	636	15	15	14.0	2	62.44	124.88	16	6	5	8	5	31.30	1935.45	5.7	0.018	0.074	01081200C10
1.5	4.71239	999.03	212	17	17	15.5	2	62.44	124.88	8	6	6	10	6	31.30	936.43	5.7	0.016	0.066	1J081100C10
1.5	4.71239	1998.05	424	17	17	15.5	2	62.44	124.88	16	6	6	10	6	31.30	1935.45	5.7	0.018	0.074	1J081200C10
2	6.28319	1005.31	160	26	24	22.0	2	62.83	125.66	8	8	7	11	7	31.30	942.71	5.7	0.016	0.066	02081100C10
2	6.28319	2010.62	320	26	24	22.0	2	62.83	125.66	16	8	7	11	7	31.30	1948.02	5.7	0.018	0.074	02081200C10
3	9.42478	1017.88	108	31	29	26.0	2	63.62	127.23	8	9	10	15	9	34.40	949.08	7.7	0.018	0.072	03081100C10
3	9.42478	2035.75	216	31	29	26.0	2	63.62	127.23	16	9	10	15	9	34.40	1966.95	7.7	0.019	0.081	03081200C10
4	12.56637	1005.31	80	41	39	35.0	3	62.83	125.66	8	12	10	15	9	37.50	930.31	7.7	0.019	0.078	04081100C10
4	12.56637	1005.31	80	41	39	35.0	3	62.83	125.66	8	12	14	20	13	37.50	930.31	11.7	0.019	0.078	04081100CS0
4	12.56637	2010.62	160	41	39	35.0	3	62.83	125.66	16	12	10	15	9	37.50	1935.62	7.7	0.021	0.088	04081200C10
4	12.56637	2010.62	160	41	39	35.0	3	62.83	125.66	16	12	14	20	13	37.50	1935.62	11.7	0.021	0.088	04081200CS0
5	15.70796	1005.31	64	50	39	34.0	3	62.83	125.66	8	12	14	20	13	30.10	945.11	11.7	0.019	0.078	05081100C10
5	15.70796	2010.62	128	50	39	34.0	3	62.83	125.66	16	12	14	20	13	30.10	1950.42	11.7	0.021	0.088	05081200C10
6	18.84956	1017.88	54	60	49	43.0	3	63.62	127.23	8	16	18	26	17	31.40	955.08	15.7	0.019	0.078	06081100C10
6	18.84956	2035.75	108	60	49	43.0	3	63.62	127.23	16	16	18	26	17	31.40	1972.95	15.7	0.021	0.088	06081200C10
8	25.13274	1005.31	40	81	79	71.0	3	62.83	125.66	8	25	22	33	21	26.60	952.11	19.7	0.022	0.084	08081100C10
8	25.13274	2010.62	80	81	79	71.0	3	62.83	125.66	16	25	22	33	21	26.60	1957.42	19.7	0.024	0.095	08081200C10
10	31.41593	1005.31	32	100	99	89.0	3	62.83	125.66	8	32	33	48	32	125.66	753.99	19.7	0.022	0.084	10081100C10
12	37.69911	1017.88	27	120	120	108.0	3	63.62	127.23	8	40	39	58	38	127.23	763.42	19.7	0.026	0.090	12081100C10

(1) Teeth Pitch Pt = Module $\times \pi$ (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Quality 9 / Stainless Steel
Tooth Thickness Tolerance : -63 ~ 0 μm
Straight Teeth
Solution, Teeth Milled
All Sides Milled



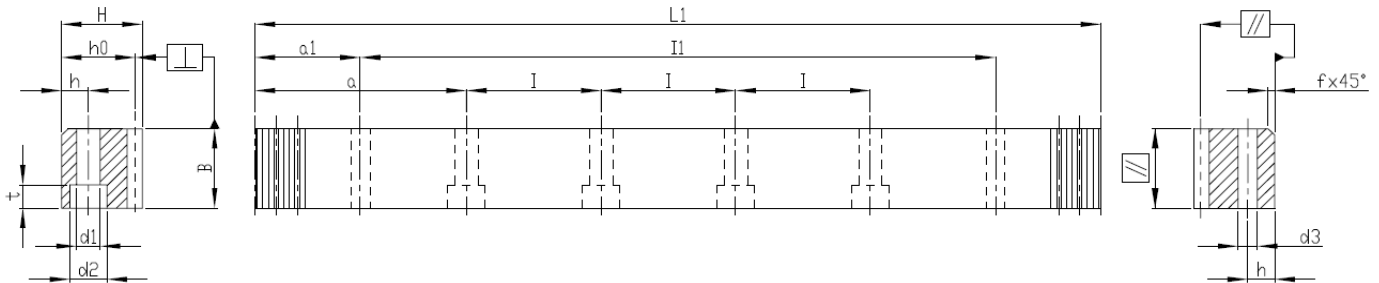
Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	h ₀	f	a	l	Hole No.	h	d1	d2	t	a1	l1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code*
1	3.14159	502.66	160	15	15	14.00	2	62.85	125.66	4	6.0	5	8	5	31.3	440.06	5.7	0.021	0.080	01091050S10
1	3.14159	1005.31	320	15	15	14.00	2	62.85	125.66	8	6.0	5	8	5	31.3	942.71	5.7	0.023	0.092	01091100S10
1.5	4.71239	508.94	108	17	17	15.50	2	63.62	127.23	4	6.0	6	10	6	34.4	440.14	5.7	0.021	0.080	1J091050S10
1.5	4.71239	1017.88	216	17	17	15.50	2	63.62	127.23	8	6.0	6	10	6	34.4	949.08	5.7	0.023	0.092	1J091100S10
1.75	5.49779	500.30	91	20	20	18.25	2	62.55	125.07	4	8.0	7	11	7	31.3	437.70	5.7	0.021	0.080	1P091050S10
1.75	5.49779	1000.60	182	20	20	18.25	2	62.55	125.07	8	8.0	7	11	7	31.3	938.00	5.7	0.023	0.092	1P091100S10
2	6.28319	502.66	80	26	24	22.00	2	62.83	125.66	4	8.0	7	11	7	31.3	440.06	5.7	0.021	0.080	02091050S10
2	6.28319	1005.31	160	26	24	22.00	2	62.83	125.66	8	8.0	7	11	7	31.3	942.71	5.7	0.023	0.092	02091100S10
3	9.42478	508.94	54	31	29	26.00	2	63.62	127.23	4	9.0	10	15	9	34.4	440.14	7.7	0.023	0.088	03091050S10
3	9.42478	1017.88	108	31	29	26.00	2	63.62	127.23	8	9.0	10	15	9	34.4	949.08	7.7	0.025	0.101	03091100S10
3	9.42478	1526.81	162	31	29	26.00	2	63.62	127.23	12	9.0	10	15	9	34.4	1458.01	7.7	0.025	0.101	03091150S10
3	9.42478	2035.75	216	31	29	26.00	2	63.62	127.23	16	9.0	10	15	9	34.4	1966.95	7.7	0.027	0.114	03091200S10
3.183	10.00000	1000.00	100	30	30	26.82	2	62.50	125.00	8	11.5	10	15	9	35.0	930.00	7.7	0.025	0.101	3B091100S10
3.183	10.00000	1500.00	150	30	30	26.82	2	62.50	125.00	12	11.5	10	15	9	35.0	1430.00	7.7	0.025	0.101	3B091150S10
3.183	10.00000	2000.00	200	30	30	26.82	2	62.50	125.00	16	11.5	10	15	9	35.0	1930.00	7.7	0.027	0.114	3B091200S10
4	12.56637	502.66	40	41	39	35.00	3	62.83	125.66	4	12.0	10	15	9	37.5	427.66	7.7	0.025	0.095	04091050S10
4	12.56637	1005.31	80	41	39	35.00	3	62.83	125.66	8	12.0	10	15	9	37.5	930.31	7.7	0.027	0.109	04091100S10
4	12.56637	1507.96	120	41	39	35.00	3	62.83	125.66	12	12.0	10	15	9	37.5	1432.96	7.7	0.027	0.109	04091150S10
4	12.56637	2010.62	160	41	39	35.00	3	62.83	125.66	16	12.0	10	15	9	37.5	1935.62	7.7	0.029	0.123	04091200S10
4.5	14.13717	1003.74	71	50	50	45.50	3	62.72	125.47	8	15.0	14	20	13	31.4	940.94	11.7	0.027	0.109	4J091100S10
4.5	14.13717	2007.48	142	50	50	45.50	3	62.72	125.47	16	15.0	14	20	13	31.4	1944.68	11.7	0.029	0.123	4J091200S10
5	15.70796	502.66	32	50	39	34.00	3	62.83	125.66	4	12.0	14	20	13	30.1	442.46	11.7	0.025	0.095	05091050S10
5	15.70796	1005.31	64	50	39	34.00	3	62.83	125.66	8	12.0	14	20	13	30.1	945.11	11.7	0.027	0.109	05091100S10
5	15.70796	1507.96	96	50	39	34.00	3	62.83	125.66	12	12.0	14	20	13	30.1	1447.76	11.7	0.027	0.109	05091150S10
5	15.70796	2010.62	128	50	39	34.00	3	62.83	125.66	16	12.0	14	20	13	30.1	1950.42	11.7	0.029	0.123	05091200S10
6	18.84956	508.94	27	60	49	43.00	3	63.62	127.23	4	16.0	18	26	17	31.4	446.14	15.7	0.025	0.095	06091050S10
6	18.84956	1017.88	54	60	49	43.00	3	63.62	127.23	8	16.0	18	26	17	31.4	955.08	15.7	0.027	0.109	06091100S10
6	18.84956	2035.75	108	60	49	43.00	3	63.62	127.23	16	16.0	18	26	17	31.4	1972.95	15.7	0.029	0.123	06091200S10

(1) Teeth Pitch Pt = Module × π (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Rack with Straight Teeth

Quality 10 / Carbon Steel
 Tooth Thickness Tolerance : -90 ~ 0 μm
 Straight Teeth
 Teeth Induction Hardened
 All Sides Milled



Mn	Pt ⁽¹⁾	L1	Teeth No.	B	H	ho	f	a	I	Hole No.	h	d1	d2	t	a1	I1	d3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code *
1	3.14159	999.03	318	15	15	14.0	2	62.44	124.88	8	6	5	8	5	31.30	936.43	5.7	0.037	0.146	01101100C10
1	3.14159	1998.05	636	15	15	14.0	2	62.44	124.88	16	6	5	8	5	31.30	1935.50	5.7	0.037	0.146	01101200C10
1.5	4.71239	999.03	212	17	17	15.5	2	62.44	124.88	8	6	6	10	6	31.30	936.43	5.7	0.037	0.146	1J101100C10
1.5	4.71239	1998.05	424	17	17	15.5	2	62.44	124.88	16	6	6	10	6	31.30	1935.45	5.7	0.041	0.165	1J101200C10
2	6.28319	1005.31	160	26	24	22.0	2	62.83	125.66	8	8	7	11	7	31.30	942.71	5.7	0.037	0.148	02101100C10
2	6.28319	2010.62	320	26	24	22.0	2	62.83	125.66	16	8	7	11	7	31.30	1948.02	5.7	0.041	0.167	02101200C10
3	9.42478	1017.88	108	31	29	26.0	2	63.62	127.23	8	9	10	15	9	34.40	949.08	7.7	0.039	0.162	03101100C10
3	9.42478	2035.75	216	31	29	26.0	2	63.62	127.23	16	9	10	15	9	34.40	1966.95	7.7	0.043	0.182	03101200C10
4	12.56637	1005.31	80	41	39	35.0	3	62.83	125.66	8	12	10	15	9	37.50	930.31	7.7	0.043	0.175	04101100C10
4	12.56637	1005.31	80	41	39	35.0	3	62.83	125.66	8	12	14	20	13	37.50	930.31	11.7	0.043	0.175	04101100CS0
4	12.56637	2010.62	160	41	39	35.0	3	62.83	125.66	16	12	10	15	9	37.50	1935.62	7.7	0.047	0.197	04101200C10
4	12.56637	2010.62	160	41	39	35.0	3	62.83	125.66	16	12	14	20	13	37.50	1935.62	11.7	0.047	0.197	04101200CS0
5	15.70796	1005.31	64	50	39	34.0	3	62.83	125.66	8	12	14	20	13	30.10	945.11	11.7	0.043	0.175	05101100C10
5	15.70796	2010.62	128	50	39	34.0	3	62.83	125.66	16	12	14	20	13	30.10	1950.42	11.7	0.047	0.197	05101200C10
6	18.84956	1017.88	54	60	49	43.0	3	63.62	127.23	8	16	18	26	17	31.40	955.08	15.7	0.043	0.175	06101100C10
6	18.84956	2035.75	108	60	49	43.0	3	63.62	127.23	16	16	18	26	17	31.40	1972.95	15.7	0.047	0.197	06101200C10
8	25.13274	1005.31	40	81	79	71.0	3	62.83	125.66	8	25	22	33	21	26.60	952.11	19.7	0.049	0.188	08101100C10
8	25.13274	2010.62	80	81	79	71.0	3	62.83	125.66	16	25	22	33	21	26.60	1957.42	19.7	0.053	0.212	08101200C10
10	31.41593	1005.31	32	100	99	89.0	3	62.83	125.66	8	32	33	48	32	125.66	753.99	19.7	0.049	0.188	10101100C10
12	37.69911	1017.88	27	120	120	108.0	3	63.62	127.23	8	40	39	58	38	127.23	763.42	19.7	0.059	0.202	12101100C10

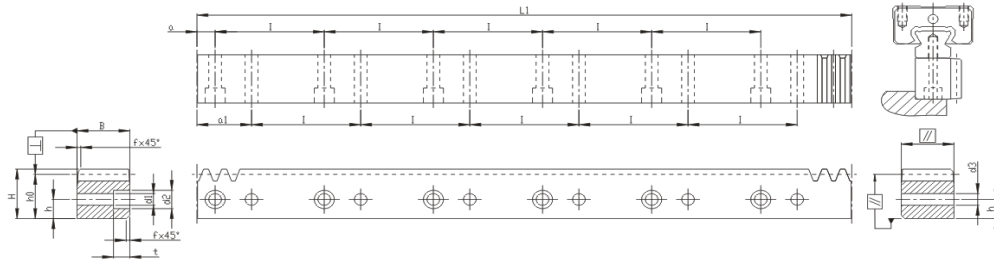
(1) Teeth Pitch Pt = Module $\times \pi$ (2) f_p = Single Pitch Error (3) F_p = Total Pitch Error

* For all models APEX also provides Rack without screw-holes. By ordering please change the 2nd last order-code position from "1" to "0". Please also refer to page 14.

Rack with Straight Teeth

(with Linear-Guide Interface, 90° Type)

Quality 6 / Carbon Steel
 Tooth Thickness Tolerance : -22 ~ 0 μm
 Straight Teeth
 Teeth Induction Hardened and Ground
 All Sides Ground



Mn	p ⁽¹⁾	LI	Teeth No.	B	H	ho	f	a	l	Hole No.	h	dl	d2	t	al	d3	fp ⁽²⁾	Fp ⁽³⁾	Order Code
1.591	5	960	192	19	19.50	17.91	1	10	60	16	7.5	4.5	7.5	5.3	30	4.5	0.008	0.034	1K061100C10A1
1.591	5	960	192	24	24.50	22.91	1	10	60	16	10.0	6	9.5	8.5	30	6	0.008	0.034	1K061100CS0A1
3.183	10	960	96	29	29.75	26.57	2	10	60	16	11.5	7	11.0	9.0	30	7	0.009	0.037	3B061100C10A1
4.244	13.33	960	72	39	39.75	35.51	2	20	80	12	14.0	10	15.0	9.0	40	10	0.010	0.040	4D061100C10A1

Quality 8 / Carbon Steel
 Tooth Thickness Tolerance : -48 ~ 0 μm
 Straight Teeth
 Teeth Milled, All Side Milled

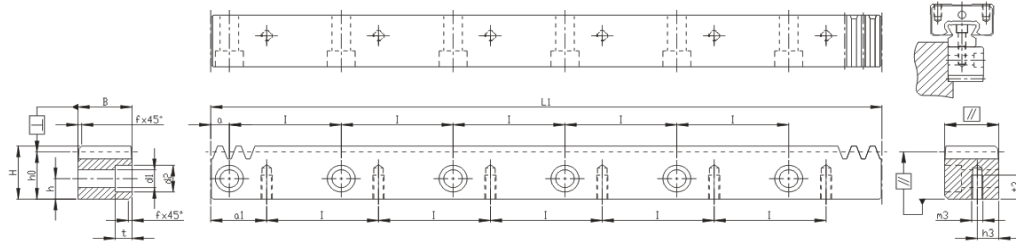
Mn	p ⁽¹⁾	LI	Teeth No.	B	H	ho	f	a	l	Hole No.	h	dl	d2	t	al	d3	fp ⁽²⁾	Fp ⁽³⁾	Order Code
1.591	5	1920	384	20	19.50	17.91	1	10	60	32	7.5	4.5	7.5	5.3	30	4.5	0.018	0.074	1K081200C10A1
1.591	5	1920	384	25	24.50	22.91	1	10	60	32	10.0	6.0	9.5	8.5	30	6.0	0.018	0.074	1K081200CS0A1
3.183	10	1920	192	30	29.75	26.57	2	10	60	32	11.5	7.0	11.0	9.0	30	7.0	0.019	0.081	3B081200C10A1
4.244	13.33	1920	144	40	39.75	35.51	2	20	80	24	14.0	10.0	15.0	9.0	40	10.0	0.021	0.088	4D081200C10A1

(1) Teeth Pitch Pt = Module × π (2) fp = Single Pitch Error (3) Fp = Total Pitch Error

Rack with Straight Teeth

(with Linear-Guide Interface, 180° Type)

Quality 6 / Carbon Steel
 Tooth Thickness Tolerance : -22 ~ 0 μm
 Straight Teeth
 Teeth Induction Hardened and Ground
 All Sides Ground



Mn	P ⁽¹⁾	LI	Teeth No.	B	H	ho	f	a	l	Hole No.	h	d1	d2	t	a1	m3	h3	t3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code
1.591	5.00	960	192	19	19.50	17.91	1	10	60	16	7.5	6	9.5	6	30	M4	7.5	8.0	0.008	0.034	1K061100C10A2
1.591	5.00	960	192	24	24.50	22.91	1	10	60	16	10.0	7	11	7	30	M5	10.0	11.0	0.008	0.034	1K061100CS0A2
3.183	10.00	960	96	29	29.75	26.57	2	10	60	16	11.5	10	15	9	30	M6	11.5	13.5	0.009	0.037	3B061100C10A2
4.244	13.33	960	72	39	39.75	35.51	2	20	80	12	14.0	12	18	12	40	M8	14.0	16.0	0.010	0.040	4D061100C10A2

Quality 8 / Carbon Steel
 Tooth Thickness Tolerance : -48 ~ 0 μm
 Straight Teeth
 Teeth Milled, All Side Milled

Mn	P ⁽¹⁾	LI	Teeth No.	B	H	ho	f	a	l	Hole No.	h	d1	d2	t	a1	m3	h3	t3	f _p ⁽²⁾	F _p ⁽³⁾	Order Code
1.591	5.00	1920	384	20	19.5	17.91	1	10	60	32	7.5	6	9.5	6	30	M4	7.5	8.0	0.018	0.074	1K081200C10A2
1.591	5.00	1920	384	25	24.5	22.91	1	10	60	32	10.0	7	11.0	7	30	M5	10.0	11.0	0.018	0.074	1K081200CS0A2
3.183	10.00	1920	192	30	29.75	26.57	2	10	60	32	11.5	10	15.0	9	30	M6	11.5	13.5	0.019	0.081	3B081200C10A2
4.244	13.33	1920	144	40	39.75	35.51	2	20	80	24	14.0	12	18.0	12	40	M8	14.0	16.0	0.021	0.088	4D081200C10A2

(1) Teeth Pitch Pt = Module × π (2) fp = Single Pitch Error (3) Fp = Total Pitch Error