

SLH

Helical Teeth Systems

Module: 1 – 12

Quality: 5, 6, and 8 (DIN 3962/63/67)



Type 1 pinion

Modules: 2, 2.5, 3, 4, 5, 6, 8, 10, & 12

Type 2 pinion

Modules: 1, 1.25, 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10, & 12

Type 3 pinion

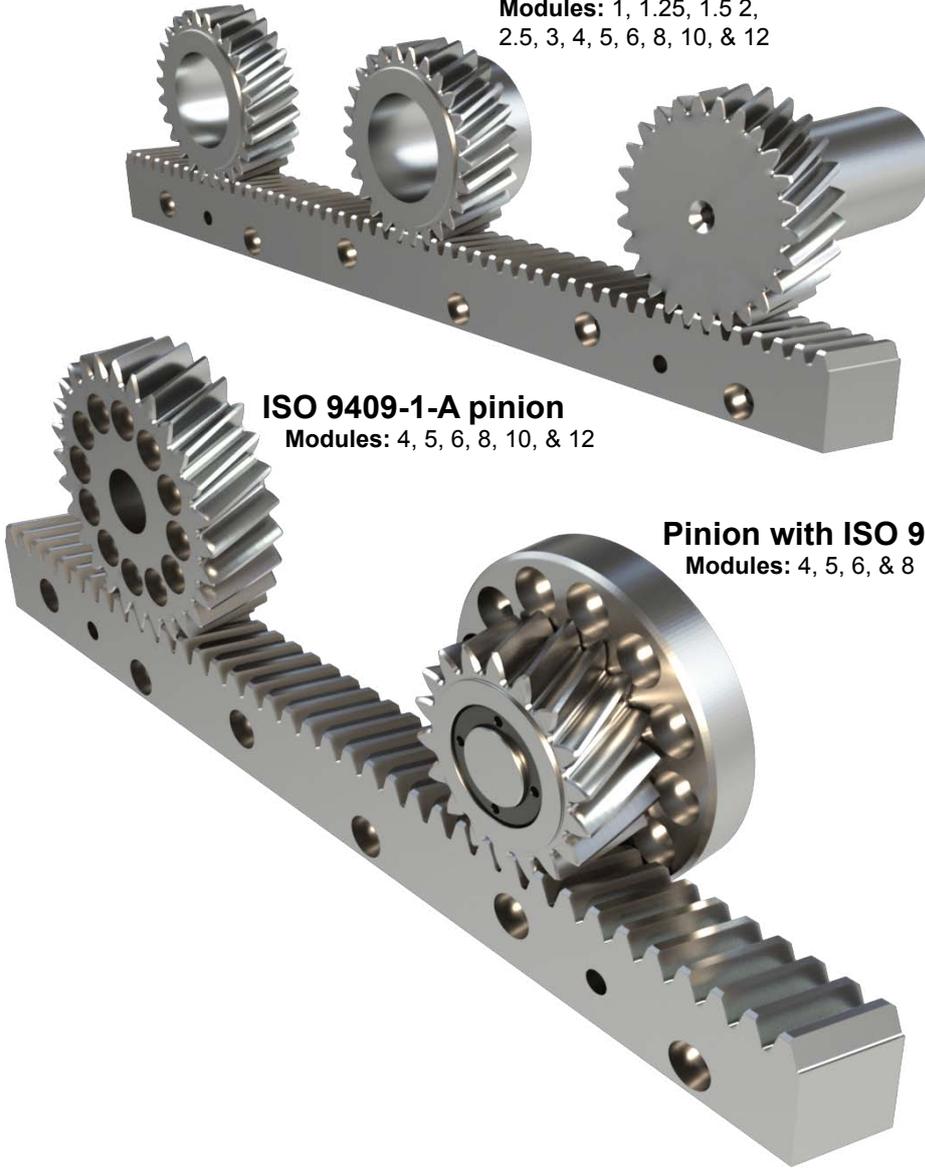
Modules: 1, 1.25, 1.5, 2, 2.5, & 3

ISO 9409-1-A pinion

Modules: 4, 5, 6, 8, 10, & 12

Pinion with ISO 9409-1-A interface adapter

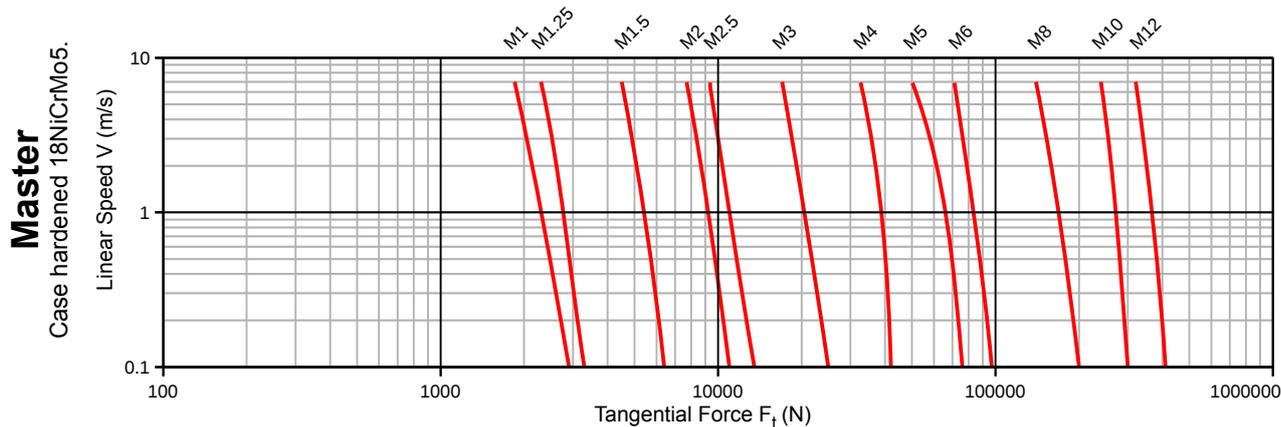
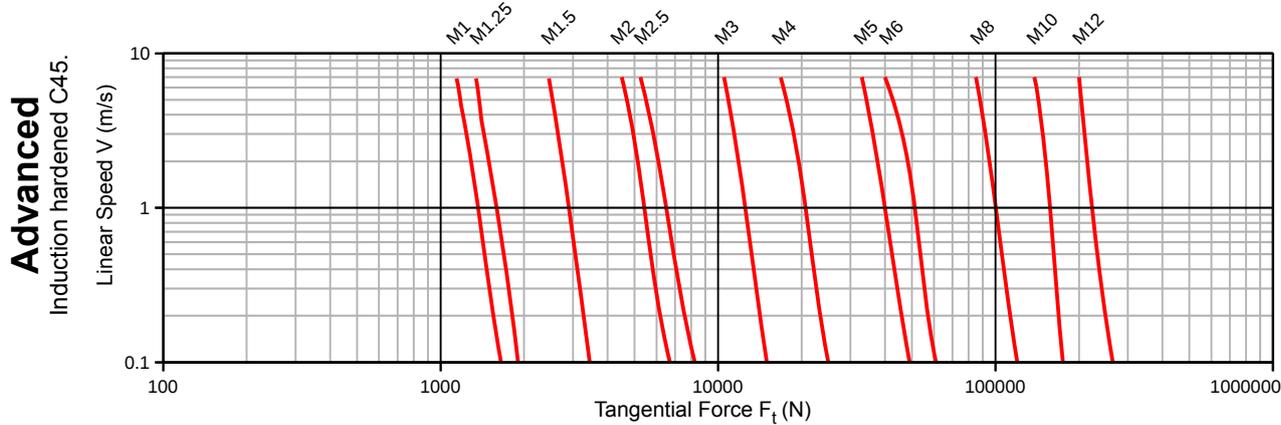
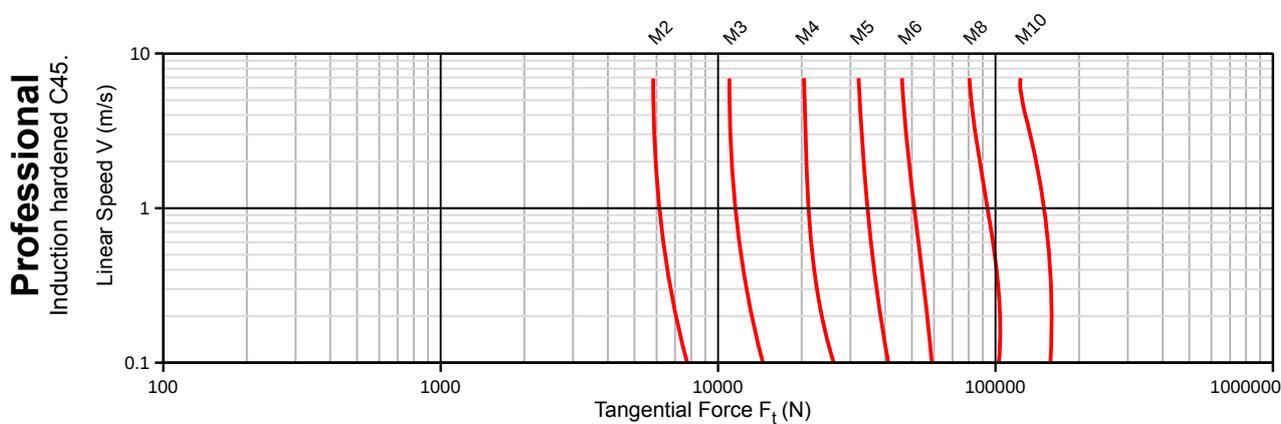
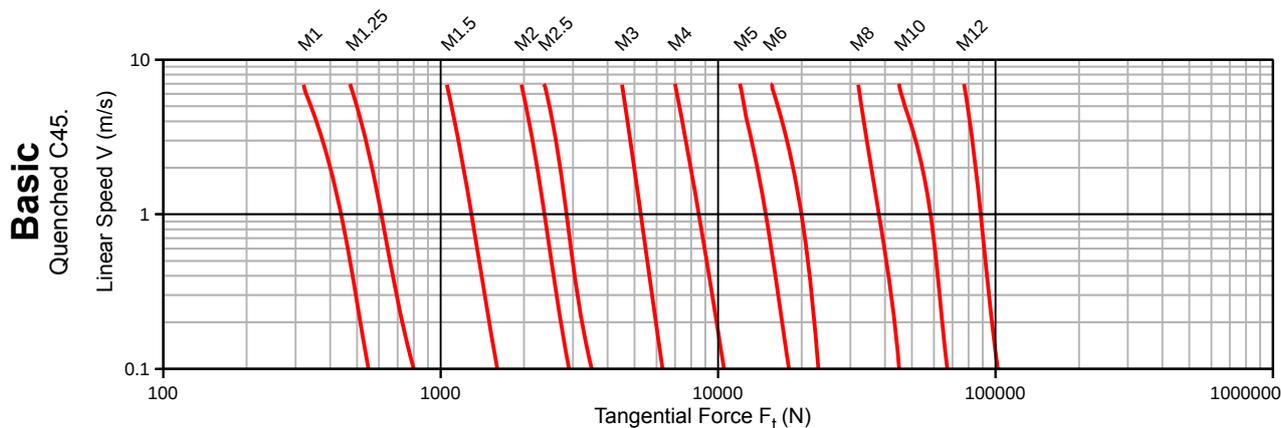
Modules: 4, 5, 6, & 8



Rack (SLHC) and pinion (SLHP) overview

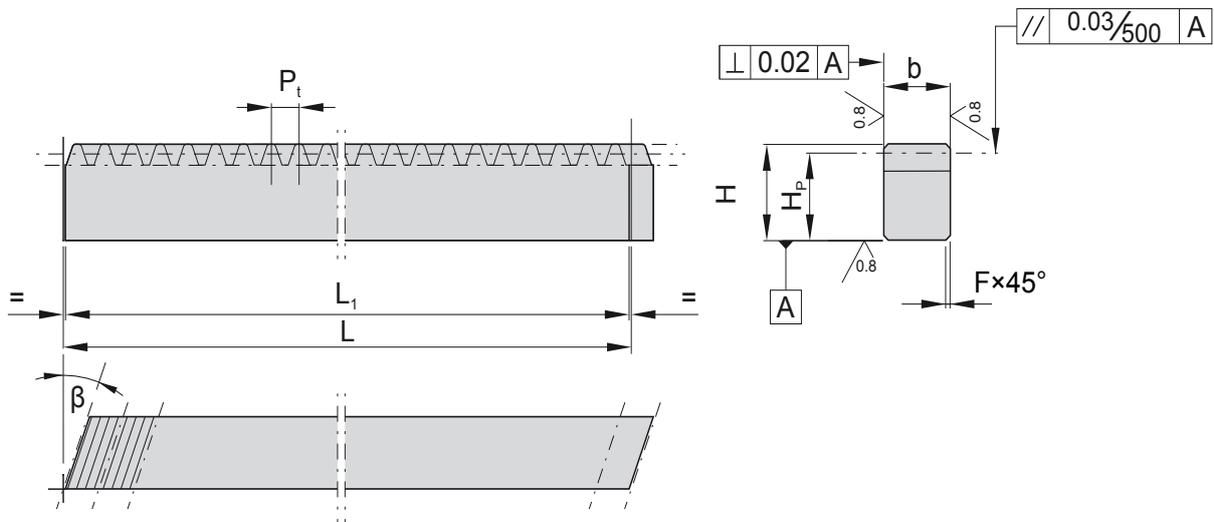
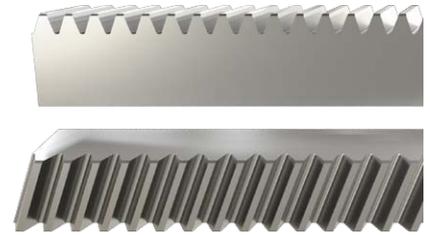
Series	Ref.	Module	Material and treatment	Hardness [HRC]	DIN 3962/63/67 Tooth Quality
Basic	SLHCS-B SLHCM-B	1; 1,25; 1,5; 2; 2,5; 3; 4; 5; 6; 8; 10 & 12	Quenched & Tempered C45	-	8
Classic	SLHCM-C	1; 1,5; 2; 2,5; 3; 4; 5 & 6	Induction Hardened & Tempered C45	55-57	6
Professional	SLHCS-P SLHCM-P	2; 3; 4; 5; 6 & 8 10	Induction Hardened & Tempered C45	58-60	5 6
Advanced	SLHCS-A SLHCM-A	1; 1,25; 1,5; 2; 2,5; 3; 4; 5; 6 & 8 10 & 12	Induction Hardened & Tempered C45	58-60	5 6
Master	SLHCS-M SLHCM-M SLHP	1; 1,25; 1,5; 2; 2,5; 3; 4; 5; 6 & 8 10 & 12 1; 1,25; 1,5; 2; 2,5; 3; 4; 5; 6; 8; 10 & 12	Case Hardened & tempered 18NiCrMo5	60-62	5 6 6

SLHC Rack Selection Charts
Helical teeth racks



Rack with helical teeth
Without holes
All faces ground

Material: C45
Tooth: Helical, milled.
Quenched and tempered. $R_m \geq 700$ N/mm²
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
Pitch error: $f_{pt} = 10$ μ m, cumulative $F_{p250} = 30$ μ m
Quality: 8 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F
SLHCS-B-0100-S	1	500,00	499,5	10	150	3,3333	25,0	24,00 ²	1
SLHCS-B-0100-M	1	1000,00	999,5	10	300	3,3333	25,0	24,00 ²	1
SLHCS-B-0125-S	1,25	500,00	499,5	10	120	4,1666	25,0	23,75 ²	1
SLHCS-B-0125-M	1,25	1000,00	999,5	10	240	4,1666	25,0	23,75 ²	1
SLHCS-B-0150-S	1,5	500,00	499,5	15	100	5,000	25,0	23,50 ²	1
SLHCS-B-0150-M	1,5	1000,00	999,5	15	200	5,000	25,0	23,50 ²	1
SLHCS-B-0200-S	2	500,00	499,5	20	75	6,6666	30,0	28,00 ²	2
SLHCS-B-0200-M	2	1000,00	999,5	20	150	6,6666	30,0	28,00 ²	2
SLHCS-B-0250-S	2,5	500,00	499,5	20	60	8,3333	30,0	27,50 ²	2
SLHCS-B-0250-M	2,5	1000,00	999,5	20	120	8,3333	30,0	27,50 ²	2
SLHCS-B-0300-S	3	500,00	499,5	30	50	10,0000	40,0	37,00 ²	2
SLHCS-B-0300-M	3	1000,00	999,5	30	100	10,0000	40,0	37,00 ²	2
SLHCS-B-0400-S	4	506,67	506,0	36	38	13,3333	49,4	45,45 ²	3
SLHCS-B-0400-M	4	1013,33	1012,5	36	76	13,3333	49,4	45,45 ²	3
SLHCS-B-0400-L	4	1520,00	1519,5	36	114	13,3333	49,4	45,45 ²	3
SLHCS-B-0500-S	5	500,00	499,5	50	30	16,6666	64,3	59,28 ³	3
SLHCS-B-0500-M	5	1000,00	999,5	50	60	16,6666	64,3	59,28 ³	3
SLHCS-B-0500-L	5	1500,00	1499,5	50	90	16,6666	64,3	59,28 ³	3
SLHCS-B-0600-S	6	500,00	499,5	55	25	20,0000	74,2	68,15 ³	3
SLHCS-B-0600-M	6	1000,00	999,5	55	50	20,0000	74,2	68,15 ³	3
SLHCS-B-0600-L	6	1500,00	1499,5	55	75	20,0000	74,2	68,15 ³	3
SLHCS-B-0800-S	8	506,67	506,0	80	19	26,6666	93,9	85,9 ³	4
SLHCS-B-0800-M	8	1013,33	1012,5	80	38	26,6666	93,9	85,9 ³	4
SLHCS-B-1000-S	10	500,00	499,5	100	15	33,3333	103,6	93,6 ²	4
SLHCS-B-1000-M	10	1000,00	999,5	100	30	33,3333	103,6	93,6 ²	4
SLHCS-B-1200-S	12	600,00	599,0	120	15	40,0000	123,4	111,35 ²	4
SLHCS-B-1200-M	12	1200,00	1198,0	120	30	40,0000	123,4	111,35 ²	4

All dimensions in millimetres

¹ Number of Teeth

² Tolerance -0,02 / -0,07

³ Tolerance -0,02 / -0,10

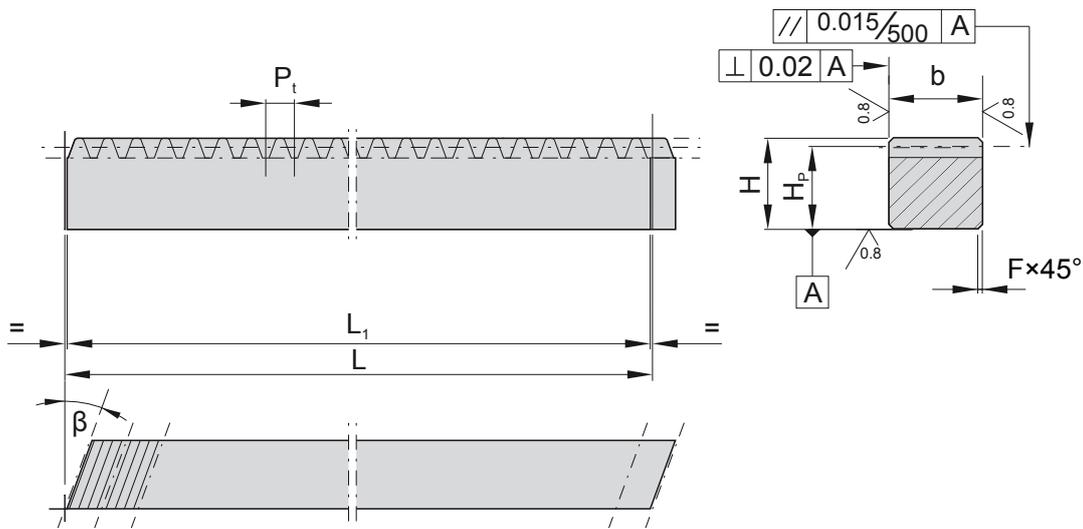
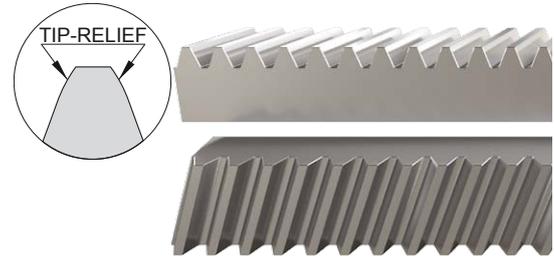
Rack with helical teeth

Without holes

All faces ground

Optimized profile, cooler, quieter

- Material:** C45
- Tooth:** Helical, ground, with tip-relief.
Induction hardened and tempered, HRC 58-60
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
- Pitch error:** Module ≤ 8 : $f_{pt}=3 \mu\text{m}$, cumulative $F_{p250}=9 \mu\text{m}$
Module 10: $f_{pt}=5 \mu\text{m}$, cumulative $F_{p250}=13 \mu\text{m}$
- Quality:** Module ≤ 8 : 5 DIN 3962/63/67
Module 10: 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _P	F
SLHCS-P-0200-S	2	500,00	499,5	24	75	6,6666	24	22 ²	2
SLHCS-P-0200-M	2	1000,00	999,5	24	150	6,6666	24	22 ²	2
SLHCS-P-0300-S	3	500,00	499,5	29	50	10,0000	29	26 ²	2
SLHCS-P-0300-M	3	1000,00	999,5	29	100	10,0000	29	26 ²	2
SLHCS-P-0400-S	4	506,67	506,0	39	38	13,3333	39	35 ²	3
SLHCS-P-0400-M	4	1000,00	999,17	39	75	13,3333	39	35 ²	3
SLHCS-P-0400-L	4	1506,67	1506,17	39	113	13,3333	39	35 ²	3
SLHCS-P-0500-S	5	500,00	499,5	49	30	16,6666	39	34 ³	3
SLHCS-P-0500-M	5	1000,00	999,5	49	60	16,6666	39	34 ³	3
SLHCS-P-0500-L	5	1500,00	1499,5	49	90	16,6666	39	34 ³	3
SLHCS-P-0600-S	6	500,00	499,5	59	25	20,0000	49	43 ³	3
SLHCS-P-0600-M	6	1000,00	999,5	59	50	20,0000	49	43 ³	3
SLHCS-P-0600-L	6	1500,00	1499,5	59	75	20,0000	49	43 ³	3
SLHCS-P-0800-S	8	480,00	479,33	79	18	26,6666	79	71 ³	3
SLHCS-P-0800-M	8	960,00	959,17	79	36	26,6666	79	71 ³	3
SLHCS-P-1000-S	10	500,00	499,0	99	15	33,3333	99	89 ³	3
SLHCS-P-1000-M	10	1000,00	999,0	99	30	33,3333	99	89 ³	3

All dimensions in millimetres

¹ Number of Teeth

² Tolerance -0,02 / -0,05

³ Tolerance -0,02 / -0,07

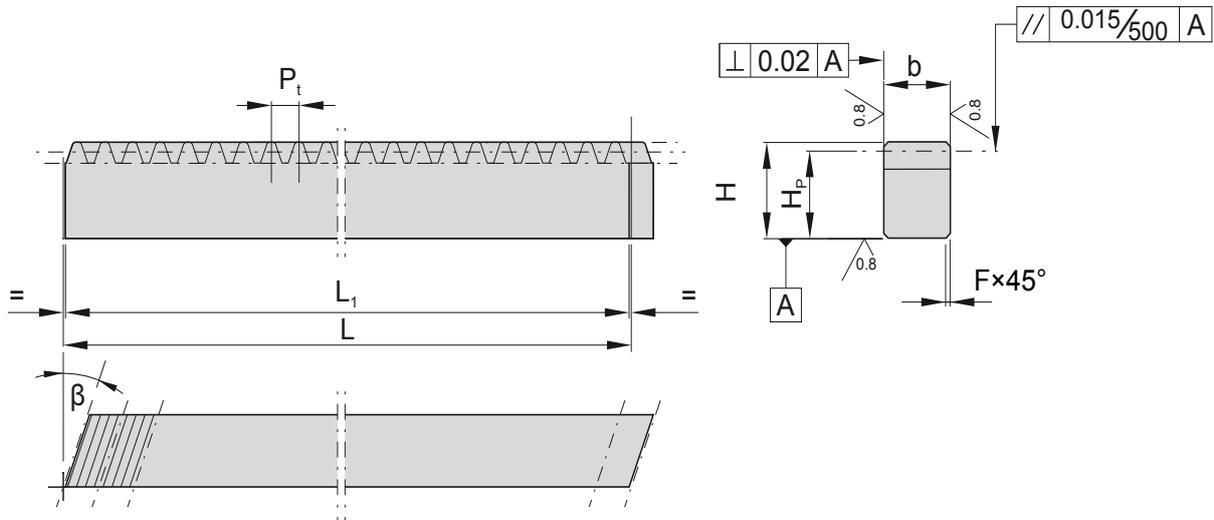
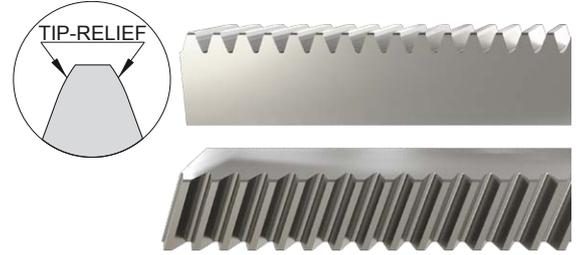
Rack with helical teeth

Without holes

All faces ground

Optimized profile, cooler, quiter

- Material:** C45
- Tooth:** Helical, ground, with tip-relief.
Induction hardened and tempered, HRC 58-60
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
- Pitch error:** Module ≤ 8 : $f_{pt}=3 \mu\text{m}$, cumulative $F_{p250}=9 \mu\text{m}$
Module ≥ 10 : $f_{pt}=5 \mu\text{m}$, cumulative $F_{p250}=13 \mu\text{m}$
- Quality:** Module ≤ 8 : 5 DIN 3962/63/67
Module ≥ 10 : 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F
SLHCS-A-0100-S	1	500,00	499,5	10	150	3,3333	25	24,00 ²	1
SLHCS-A-0100-M	1	1000,00	999,5	10	300	3,3333	25	24,00 ²	1
SLHCS-A-0125-S	1,25	500,00	499,5	10	120	4,1666	25	23,75 ²	1
SLHCS-A-0125-M	1,25	1000,00	999,5	10	240	4,1666	25	23,75 ²	1
SLHCS-A-0150-S	1,5	500,00	499,5	15	100	5,0000	25	23,50 ²	1
SLHCS-A-0150-M	1,5	1000,00	999,5	15	200	5,0000	25	23,50 ²	1
SLHCS-A-0200-S	2	500,00	499,5	20	75	6,6666	30	28,00 ²	2
SLHCS-A-0200-M	2	1000,00	999,5	20	150	6,6666	30	28,00 ²	2
SLHCS-A-0250-S	2,5	500,00	499,5	20	60	8,3333	30	27,50 ²	2
SLHCS-A-0250-M	2,5	1000,00	999,5	20	120	8,3333	30	27,50 ²	2
SLHCS-A-0300-S	3	500,00	499,5	30	50	10,0000	40	37,00 ²	2
SLHCS-A-0300-M	3	1000,00	999,5	30	100	10,0000	40	37,00 ²	2
SLHCS-A-0400-S	4	506,67	506,0	36	38	13,3333	50	45,45 ²	3
SLHCS-A-0400-M	4	1013,33	1012,5	36	76	13,3333	50	45,45 ²	3
SLHCS-A-0400-L	4	1520,00	1519,5	36	114	13,3333	50	45,45 ²	3
SLHCS-A-0500-S	5	500,00	499,5	50	30	16,6666	65	59,28 ³	3
SLHCS-A-0500-M	5	1000,00	999,5	50	60	16,6666	65	59,28 ³	3
SLHCS-A-0500-L	5	1500,00	1499,5	50	90	16,6666	65	59,28 ³	3
SLHCS-A-0600-S	6	500,00	499,5	55	25	20,0000	75	68,15 ³	3
SLHCS-A-0600-M	6	1000,00	999,5	55	50	20,0000	75	68,15 ³	3
SLHCS-A-0600-L	6	1500,00	1499,5	55	75	20,0000	75	68,15 ³	3
SLHCS-A-0800-S	8	506,67	506,0	80	19	26,6666	95	85,9 ³	4
SLHCS-A-0800-M	8	1013,33	1012,5	80	38	26,6666	95	85,9 ³	4
SLHCS-A-1000-S	10	500,00	499,5	100	15	33,3333	105	93,6 ³	4
SLHCS-A-1000-M	10	1000,00	999,5	100	30	33,3333	105	93,6 ³	4
SLHCS-A-1200-S	12	600,00	599,0	120	15	40,0000	125	111,35 ³	4
SLHCS-A-1200-M	12	1200,00	1198,0	120	30	40,0000	125	111,35 ³	4

All dimensions in millimetres

¹ Number of Teeth

² Tolerance -0,02 / -0,05

³ Tolerance -0,02 / -0,07

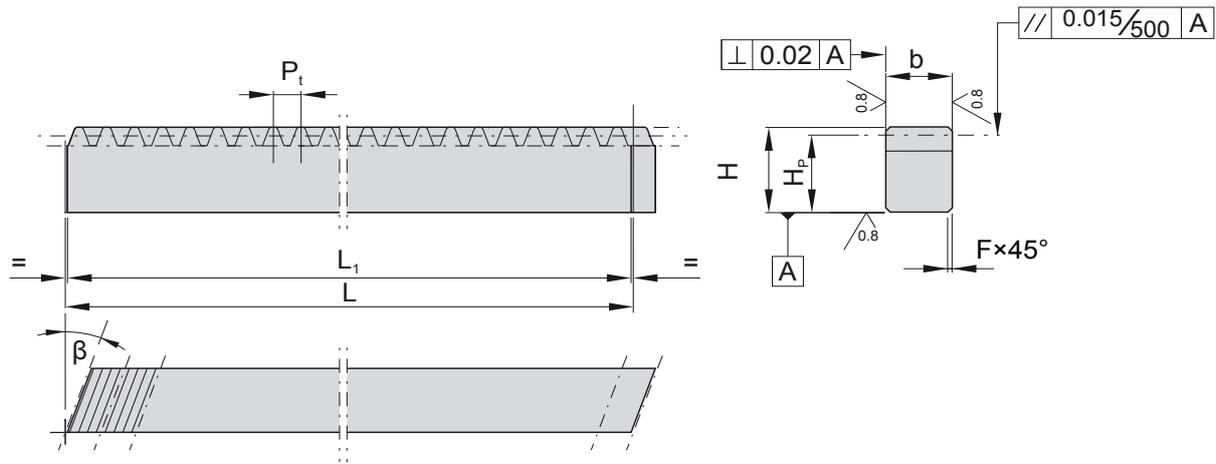
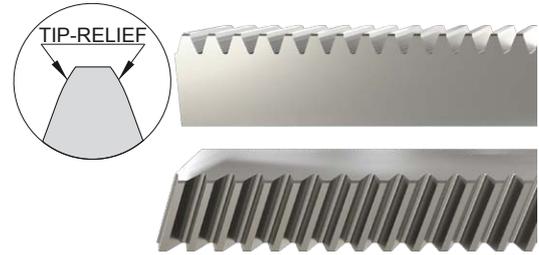
Rack with helical teeth

Without holes

All faces ground

Optimized profile, cooler, quieter

- Material:** 18CrNiMo5
- Tooth:** Helical, ground, with tip-relief.
Case hardened and tempered, HRC 60-62
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
- Pitch error:** Module ≤ 8 : $f_{pt}=3 \mu\text{m}$, cumulative $F_{p250}=9 \mu\text{m}$
Module ≥ 10 : $f_{pt}=5 \mu\text{m}$, cumulative $F_{p250}=13 \mu\text{m}$
- Quality:** Module ≤ 8 : 5 DIN 3962/63/67
Module ≥ 10 : 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F
SLHCS-M-0100-S	1	500,00	499,5	10	150	3,3333	25	24,00 ²	1
SLHCS-M-0100-M	1	1000,00	999,5	10	300	3,3333	25	24,00 ²	1
SLHCS-M-0125-S	1,25	500,00	499,5	10	120	4,1666	25	23,75 ²	1
SLHCS-M-0125-M	1,25	1000,00	999,5	10	240	4,1666	25	23,75 ²	1
SLHCS-M-0150-S	1,5	500,00	499,5	15	100	5,000	25	23,50 ²	1
SLHCS-M-0150-M	1,5	1000,00	999,5	15	200	5,000	25	23,50 ²	1
SLHCS-M-0200-S	2	500,00	499,5	20	75	6,6666	30	28,00 ²	2
SLHCS-M-0200-M	2	1000,00	999,5	20	150	6,6666	30	28,00 ²	2
SLHCS-M-0250-S	2,5	500,00	499,5	20	60	8,3333	30	27,50 ²	2
SLHCS-M-0250-M	2,5	1000,00	999,5	20	120	8,3333	30	27,50 ²	2
SLHCS-M-0300-S	3	500,00	499,5	30	50	10,0000	40	37,00 ²	2
SLHCS-M-0300-M	3	1000,00	999,5	30	100	10,0000	40	37,00 ²	2
SLHCS-M-0400-S	4	506,67	506,0	36	38	13,3333	50	45,45 ²	3
SLHCS-M-0400-M	4	1013,33	1012,5	36	76	13,3333	50	45,45 ²	3
SLHCS-M-0400-L	4	1520,00	1519,5	36	114	13,3333	50	45,45 ²	3
SLHCS-M-0500-S	5	500,00	499,5	50	30	16,6666	65	59,28 ³	3
SLHCS-M-0500-M	5	1000,00	999,5	50	60	16,6666	65	59,28 ³	3
SLHCS-M-0500-L	5	1500,00	1499,5	50	90	16,6666	65	59,28 ³	3
SLHCS-M-0600-S	6	500,00	499,5	55	25	20,0000	75	68,15 ³	3
SLHCS-M-0600-M	6	1000,00	999,5	55	50	20,0000	75	68,15 ³	3
SLHCS-M-0600-L	6	1500,00	1499,5	55	75	20,0000	75	68,15 ³	3
SLHCS-M-0800-S	8	506,67	506,0	80	19	26,6666	95	85,9 ³	4
SLHCS-M-0800-M	8	1013,33	1012,5	80	38	26,6666	95	85,9 ³	4
SLHCS-M-1000-S	10	500,00	499,5	100	15	33,3333	105	93,6 ³	4
SLHCS-M-1000-M	10	1000,00	999,5	100	30	33,3333	105	93,6 ³	4
SLHCS-M-1200-S	12	600,00	599,0	120	15	40,0000	125	111,35 ³	4
SLHCS-A-1200-M	12	1200,00	1198,0	120	30	40,0000	125	111,35 ³	4

All dimensions in millimetres

¹ Number of Teeth

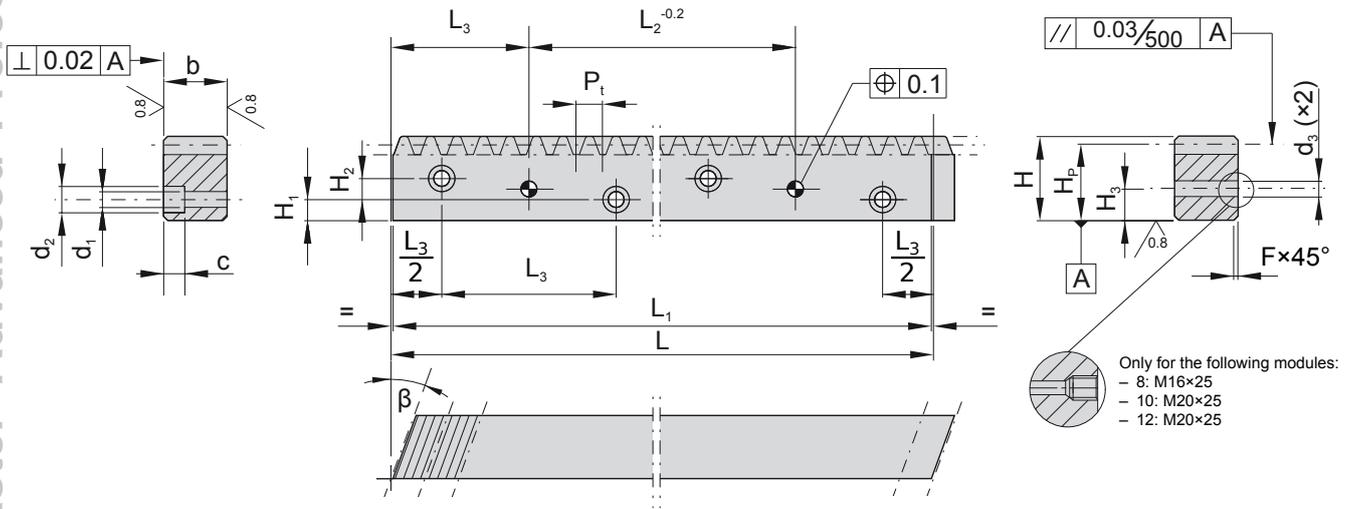
² Tolerance -0,02 / -0,05

³ Tolerance -0,02 / -0,07

Axis Automation, SLU Avda de la Plata, 23-1 E-46013 Valencia - Spain Tel. +34-963 950 442 e-mail: info@servotak.com www.servotak.com

Rack with helical teeth
With holes for continuous linking
All faces ground

Material: C45
Tooth: Helical, milled.
 Quenched and tempered. $R_m \geq 700$ N/mm²
 Pressure angle (α): 20°
 Helix angle (β): 19°31'42", right-handed
Pitch error: $f_{pt} = 10$ μ m, cumulative $F_{p250} = 30$ μ m
Quality: 8 DIN 3962/63/67



Only for the following modules:
 - 8: M16x25
 - 10: M20x25
 - 12: M20x25

Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _P	F	L ₂	H ₃	d ₃	L ₃	n	H ₁	H ₂	d ₁	d ₂	c
SLHCM-B-0100-S	1	500,00	499,5	10	150	3,3333	25,0	24,00 ²	1	333,34	10	4,7	83,33	5	8	4	6	10	6
SLHCM-B-0100-M	1	1000,00	999,5	10	300	3,3333	25,0	24,00 ²	1	833,34	10	4,7	83,33	11	8	4	6	10	6
SLHCM-B-0125-S	1,25	500,00	499,5	10	120	4,1666	25,0	23,75 ²	1	333,34	10	4,7	83,33	5	8	4	6	10	6
SLHCM-B-0125-M	1,25	1000,00	999,5	10	240	4,1666	25,0	23,75 ²	1	833,34	10	4,7	83,33	11	8	4	6	10	6
SLHCM-B-0150-S	1,5	500,00	499,5	15	100	5,000	25,0	23,50 ²	1	333,34	10	5,7	83,33	5	8	4	7	11	7
SLHCM-B-0150-M	1,5	1000,00	999,5	15	200	5,000	25,0	23,50 ²	1	833,34	10	5,7	83,33	11	8	4	7	11	7
SLHCM-B-0200-S	2	500,00	499,5	20	75	6,6666	30,0	28,00 ²	2	333,34	10	5,7	83,33	5	8	6	7	11	7
SLHCM-B-0200-M	2	1000,00	999,5	20	150	6,6666	30,0	28,00 ²	2	833,34	10	5,7	83,33	11	8	6	7	11	7
SLHCM-B-0250-S	2,5	500,00	499,5	20	60	8,3333	30,0	27,50 ²	2	333,34	10	5,7	83,33	5	8	6	7	11	7
SLHCM-B-0250-M	2,5	1000,00	999,5	20	120	8,3333	30,0	27,50 ²	2	833,34	10	5,7	83,33	11	8	6	7	11	7
SLHCM-B-0300-S	3	500,00	499,5	30	50	10,0000	40,0	37,00 ²	2	333,34	15	7,7	83,33	5	10	10	10	15	9
SLHCM-B-0300-M	3	1000,00	999,5	30	100	10,0000	40,0	37,00 ²	2	833,34	15	7,7	83,33	11	10	10	10	15	9
SLHCM-B-0400-S	4	506,67	506,0	36	38	13,3333	49,4	45,45 ²	3	337,79	20	9,7	84,44	5	12	11	12	18	11
SLHCM-B-0400-M	4	1013,33	1012,5	36	76	13,3333	49,4	45,45 ²	3	844,45	20	9,7	84,44	11	12	11	12	18	11
SLHCM-B-0400-L	4	1520,00	1519,5	36	114	13,3333	49,4	45,45 ²	3	1351,12	20	9,7	84,44	17	12	11	12	18	11
SLHCM-B-0500-S	5	500,00	499,5	50	30	16,6666	64,3	59,28 ³	3	333,34	25	11,7	83,33	5	14	19	14	20	13
SLHCM-B-0500-M	5	1000,00	999,5	50	60	16,6666	64,3	59,28 ³	3	833,34	25	11,7	83,33	11	14	19	14	20	13
SLHCM-B-0500-L	5	1500,00	1499,5	50	90	16,6666	64,3	59,28 ³	3	1333,34	25	11,7	83,33	17	14	19	14	20	13
SLHCM-B-0600-S	6	500,00	499,5	55	25	20,0000	74,2	68,15 ³	3	333,34	30	11,7	83,33	5	17	20	18	26	17
SLHCM-B-0600-M	6	1000,00	999,5	55	50	20,0000	74,2	68,15 ³	3	833,34	30	11,7	83,33	11	17	20	18	26	17
SLHCM-B-0600-L	6	1500,00	1499,5	55	75	20,0000	74,2	68,15 ³	3	1333,34	30	11,7	83,33	17	17	20	18	26	17
SLHCM-B-0800-S	8	506,67	506,0	80	19	26,6666	93,9	85,90 ³	4	337,79	35	13,7	84,44	5	17	34	18	26	17
SLHCM-B-0800-M	8	1013,33	1012,5	80	38	26,6666	93,9	85,90 ³	4	844,45	35	13,7	84,44	11	17	34	18	26	17
SLHCM-B-1000-S	10	500,00	499,0	100	15	33,3333	103,6	93,6 ²	4	300,00	40	15,5	100,00	4	24	31	22	33	25
SLHCM-B-1000-M	10	1000,00	999,0	100	30	33,3333	103,6	93,6 ²	4	800,00	40	15,5	100,00	9	24	31	22	33	25
SLHCM-B-1200-S	12	600,00	599,0	120	15	40,0000	123,4	111,35 ²	4	360,00	48	19,5	120,00	4	30	36	22	33	25
SLHCM-B-1200-M	12	1200,00	1198,0	120	30	40,0000	123,4	111,35 ²	4	960,00	48	19,5	120,00	9	30	36	22	33	25

All dimensions in millimetres

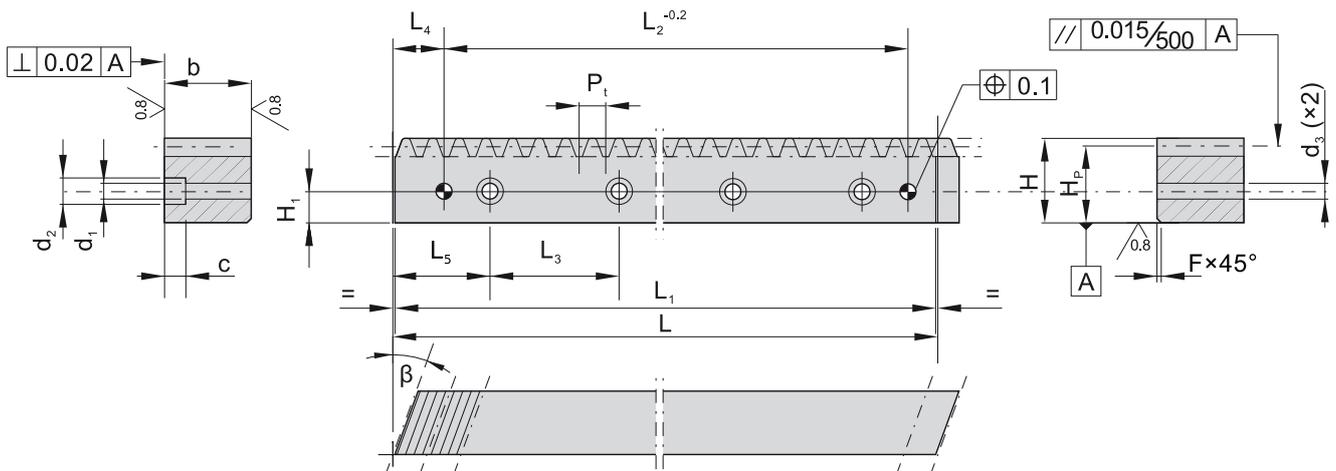
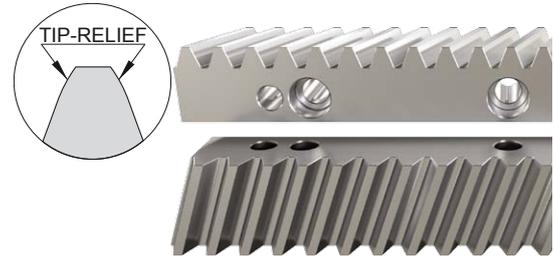
¹ Number of Teeth

² Tolerance -0,02 / -0,07

³ Tolerance -0,02 / -0,10

Rack with helical teeth
With holes for continuous linking
All faces ground
Optimized profile, cooler, quieter

Material: C45
Tooth: Helical, ground, with tip-relief.
Induction hardened and tempered, HRC 58-60
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
Pitch error: Module 1-3: $f_{pt}=8 \mu\text{m}$, cumulative $F_{p1000}=35 \mu\text{m}$
Module 4-6: $f_{pt}=9 \mu\text{m}$, cumulative $F_{p1000}=38 \mu\text{m}$
Quality: 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F	L ₂	d ₃	L ₃	L ₄	L ₅	n ²	H ₁	d ₁	d ₂	c
SLHCM-C-0100-S	1	500.00	499.998	19	150	3.333	19	18 ³	2	440.121	5.7	125	36.68	69.24	4	8	7	11	7
SLHCM-C-0100-M	1	1000.00	999.999	19	300	3.333	19	18 ³	2	940.121	5.7	125	36.68	69.24	8	8	7	11	7
SLHCM-C-0150-L	1	1500.00	1499.998	19	450	3.333	19	18 ³	1.5	1440.121	5.7	125	36.68	69.24	12	8	7	11	7
SLHCM-C-0150-S	1.5	500.00	499.999	19	100	5.000	19	17.5 ³	1.5	440.121	5.7	125	36.68	69.24	4	8	7	11	7
SLHCM-C-0150-M	1.5	1000.00	999.999	19	200	5.000	19	17.5 ³	1.5	940.121	5.7	125	36.68	69.24	8	8	7	11	7
SLHCM-C-0200-L	1.5	1500.00	1499.998	19	300	5.000	19	17.5 ³	1.5	1440.121	5.7	125	36.68	69.24	12	8	7	11	7
SLHCM-C-0200-S	2	500.00	499.999	24	75	6.667	24	22 ³	2	436.575	5.7	125	40.22	71.01	4	8	7	11	7
SLHCM-C-0200-M	2	1000.00	999.999	24	150	6.667	24	22 ³	2	936.575	5.7	125	40.22	71.01	8	8	7	11	7
SLHCM-C-0200-L	2	1500.00	1499.998	24	225	6.667	24	22 ³	2	1436.574	5.7	125	40.22	71.01	12	8	7	11	7
SLHCM-C-0250-X	2	2000.00	1999.998	24	300	6.667	24	22 ³	2	1936.574	5.7	125	40.22	71.01	16	8	7	11	7
SLHCM-C-0250-S	2.5	500.00	499.999	29	60	8.333	29	26.5 ³	2	430.028	7.7	125	45.28	72.79	4	9	10	15	9
SLHCM-C-0250-M	2.5	1000.00	999.999	29	120	8.333	29	26.5 ³	2	930.028	7.7	125	45.28	72.79	8	9	10	15	9
SLHCM-C-0250-L	2.5	1500.00	1499.998	29	180	8.333	29	26.5 ³	2	1430.028	7.7	125	45.28	72.79	12	9	10	15	9
SLHCM-C-0300-X	2.5	2000.00	1999.998	29	240	8.333	29	26.5 ³	2	1930.027	7.7	125	45.28	72.79	16	9	10	15	9
SLHCM-C-0300-S	3	500.00	499.999	29	50	10.000	29	26 ³	2	430.028	7.7	125	45.28	72.79	4	9	10	15	9
SLHCM-C-0300-M	3	1000.00	999.999	29	100	10.000	29	26 ³	2	930.028	7.7	125	45.28	72.79	8	9	10	15	9
SLHCM-C-0300-L	3	1500.00	1499.998	29	150	10.000	29	26 ³	2	1430.028	7.7	125	45.28	72.79	12	9	10	15	9
SLHCM-C-0400-X	3	2000.00	1999.998	29	200	10.000	29	26 ³	2	1930.027	7.7	125	45.28	72.79	16	9	10	15	9
SLHCM-C-0400-S	4	506.67	506.666	39	38	13.333	39	35 ³	3	433.000	7.7	125	47.13	76.33	4	12	10	15	9
SLHCM-C-0400-M	4	1000.00	999.999	39	75	13.333	39	35 ³	3	933.395	7.7	125	47.13	76.33	8	12	10	15	9
SLHCM-C-0400-L	4	1506.67	1506.665	39	113	13.333	39	35 ³	3	1440.061	7.7	125	47.13	76.33	12	12	10	15	9
SLHCM-C-0500-X	4	2000.00	1999.998	39	150	13.333	39	35 ³	3	1933.394	7.7	125	47.13	76.33	16	12	10	15	9
SLHCM-C-0500-S	5	500.00	499.999	39	30	16.667	49	34 ⁴	3	432.095	11.7	125	54.88	79.88	4	12	14	20	13
SLHCM-C-0500-M	5	1000.00	999.999	39	60	16.667	49	34 ⁴	3	932.095	11.7	125	54.88	79.88	8	12	14	20	13
SLHCM-C-0500-L	5	1500.00	1499.998	39	90	16.667	49	34 ⁴	3	1425.000	11.7	125	54.88	79.88	12	12	14	20	13
SLHCM-C-0600-X	5	2000.00	1999.998	39	120	16.667	49	34 ⁴	3	1925.000	11.7	125	54.88	79.88	16	12	14	20	13
SLHCM-C-0600-S	6	500.00	499.999	49	25	20.000	59	43 ⁴	3	425.000	15.7	125	58.42	83.42	4	16	18	26	17
SLHCM-C-0600-M	6	1000.00	999.999	49	50	20.000	59	43 ⁴	3	925.000	15.7	125	58.42	83.42	8	16	18	26	17
SLHCM-C-0600-L	6	1500.00	1499.998	49	75	20.000	59	43 ⁴	3	1425.000	15.7	125	58.42	83.42	12	16	18	26	17
SLHCM-C-0000-X	6	2000.00	1999.998	49	100	20.000	59	43 ⁴	3	1925.000	15.7	125	58.42	83.42	16	16	18	26	17

All dimensions in millimetres

¹ Number of Teeth

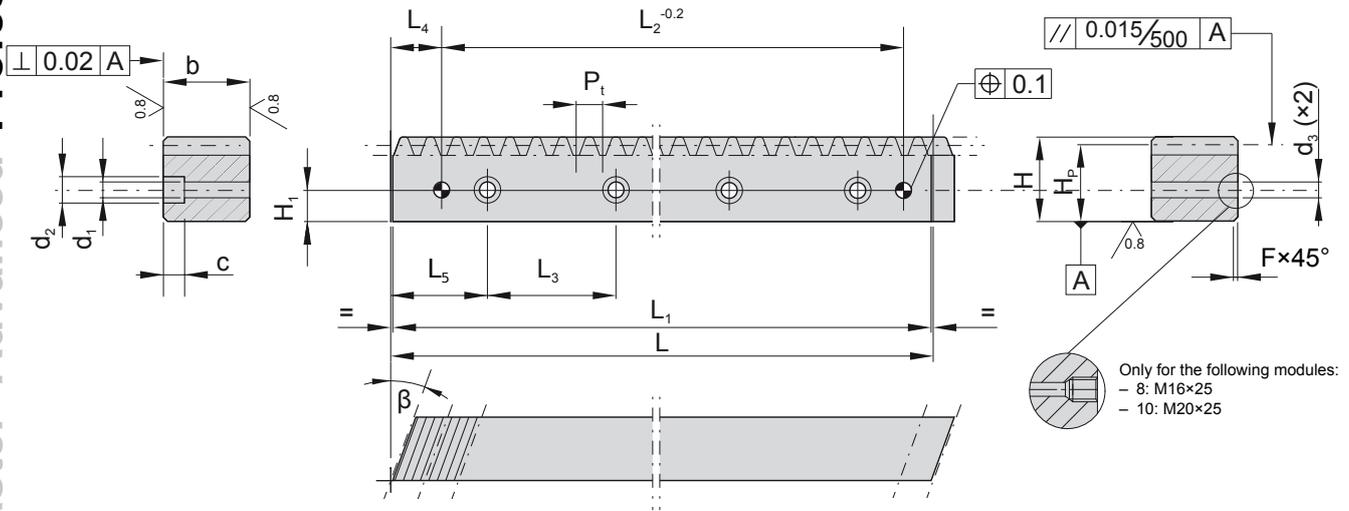
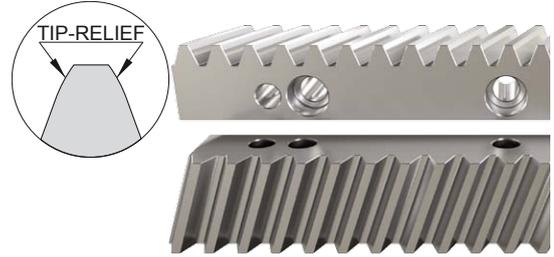
² Number of Fixing Holes

³ Tolerance -0,02 / -0,05

⁴ Tolerance -0,02 / -0,07

Rack with helical teeth
With holes for continuous linking
All faces ground
Optimized profile, cooler, quieter

Material: C45
Tooth: Helical, ground, with tip-relief.
Induction hardened and tempered, HRC 58-60
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
Pitch error: Module ≤ 8 : $f_{pt}=3 \mu\text{m}$, cumulative $F_{p250}=9 \mu\text{m}$
Module 10: $f_{pt}=5 \mu\text{m}$, cumulative $F_{p250}=13 \mu\text{m}$
Quality: Module ≤ 8 : 5 DIN 3962/63/67
Module 10: 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F	L ₂	d ₃	L ₃	L ₄	L ₅	n ²	H ₁	d ₁	d ₂	c
SLHCM-P-0200-S	2	500,00	499,5	24	75	6,6666	24	22 ³	2	436,6	5,7	125	40,2	71	4	8	7	11	7
SLHCM-P-0200-M	2	1000,00	999,5	24	150	6,6666	24	22 ³	2	936,6	5,7	125	40,2	71	8	8	7	11	7
SLHCM-P-0300-S	3	500,00	499,5	29	50	10,0000	29	26 ³	2	430	7,7	125	45,3	72,8	4	9	10	15	9
SLHCM-P-0300-M	3	1000,00	999,5	29	100	10,0000	29	26 ³	2	930	7,7	125	45,3	72,8	8	9	10	15	9
SLHCM-P-0400-S	4	506,67	506,0	39	38	13,3333	39	35 ³	3	433	7,7	125	47,1	76,3	4	12	10	15	9
SLHCM-P-0400-M	4	1000,00	999,17	39	75	13,3333	39	35 ³	3	933,4	7,7	125	47,1	76,3	8	12	10	15	9
SLHCM-P-0400-L	4	1506,67	1506,17	39	113	13,3333	39	35 ³	3	1436	7,7	125	47,1	76,3	12	12	10	15	9
SLHCM-P-0500-S	5	500,00	499,5	49	30	16,6666	39	34 ⁴	3	425,0	11,7	125	54,9	79,9	4	12	14	20	13
SLHCM-P-0500-M	5	1000,00	999,5	49	60	16,6666	39	34 ⁴	3	925,0	11,7	125	54,9	79,9	8	12	14	20	13
SLHCM-P-0500-L	5	1500,00	1499,5	49	90	16,6666	39	34 ⁴	3	1425,0	11,7	125	54,9	79,9	12	12	14	20	13
SLHCM-P-0600-S	6	500,00	499,5	59	25	20,0000	49	43 ⁴	3	425,0	15,7	125	58,4	83,4	4	16	18	26	17
SLHCM-P-0600-M	6	1000,00	999,5	59	50	20,0000	49	43 ⁴	3	925,0	15,7	125	58,4	83,4	8	16	18	26	17
SLHCM-P-0600-L	6	1500,00	1499,5	59	75	20,0000	49	43 ⁴	3	1425,0	15,7	125	58,4	83,4	12	16	18	26	17
SLHCM-P-0800-S	8	480,00	479,33	79	18	26,6666	79	71 ⁴	3	240	19,7	120	148	88	4	25	22	33	21
SLHCM-P-0800-M	8	960,00	959,17	79	36	26,6666	79	71 ⁴	3	720	19,7	120	148	88	8	25	22	33	21
SLHCM-P-1000-S	10	500,00	499,0	99	15	33,3333	99	89 ⁴	3	250	19,7	125	160,11	97,61	4	32	33	48	32
SLHCM-P-1000-M	10	1000,00	999,0	99	30	33,3333	99	89 ⁴	3	750	19,7	125	160,11	97,61	8	32	33	48	32

All dimensions in millimetres

¹ Number of Teeth

² Number of Fixing Holes

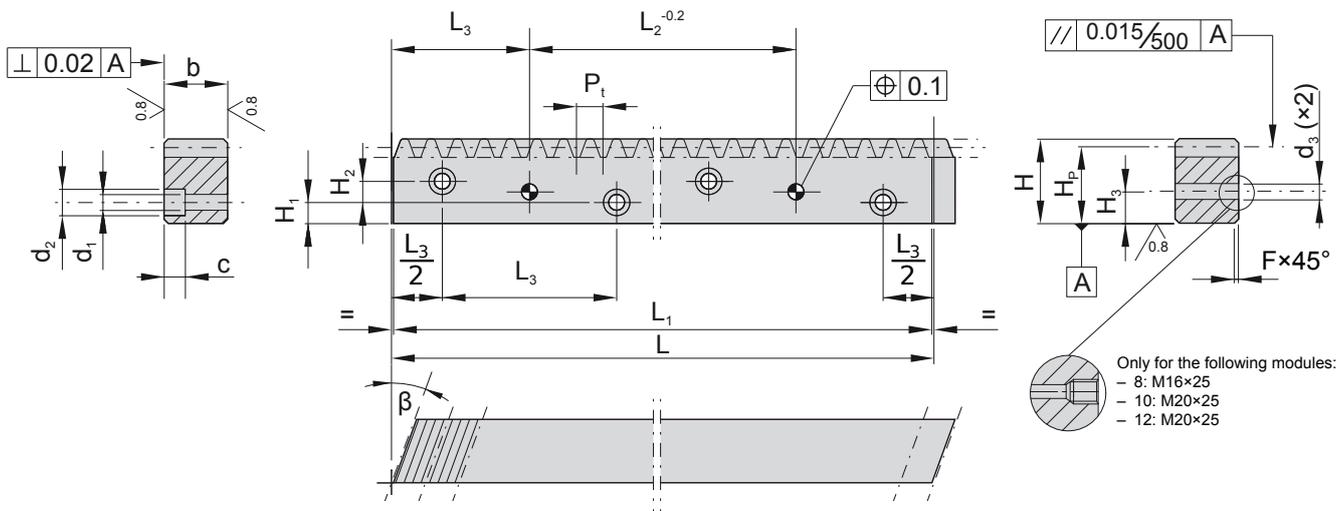
³ Tolerance -0,02 / -0,05

⁴ Tolerance -0,02 / -0,07

Rack with helical teeth

With holes for continuous linking
All faces ground
Optimized profile, cooler, quieter

- Material:** C45
- Tooth:** Helical, ground, with tip-relief.
Induction hardened and tempered, HRC 58-60
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
- Pitch error:** Module ≤ 8 : $f_{pt}=3 \mu\text{m}$, cumulative $F_{p250}=9 \mu\text{m}$
Module ≥ 10 : $f_{pt}=5 \mu\text{m}$, cumulative $F_{p250}=13 \mu\text{m}$
- Quality:** Module ≤ 8 : 5 DIN 3962/63/67
Module ≥ 10 : 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F	L ₂	H ₃	d ₃	L ₃	n	H ₁	H ₂	d ₁	d ₂	c
SLHCM-A-0100-S	1	500,00	499,5	10	150	3,3333	25	24,00 ²	1	333,34	10	4,7	83,33	5	8	4	6	10	6
SLHCM-A-0100-M	1	1000,00	999,5	10	300	3,3333	25	24,00 ²	1	833,34	10	4,7	83,33	11	8	4	6	10	6
SLHCM-A-0125-S	1,25	500,00	499,5	10	120	4,1666	25	23,75 ²	1	333,34	10	4,7	83,33	5	8	4	6	10	6
SLHCM-A-0125-M	1,25	1000,00	999,5	10	240	4,1666	25	23,75 ²	1	833,34	10	4,7	83,33	11	8	4	6	10	6
SLHCM-A-0150-S	1,5	500,00	499,5	15	100	5,0000	25	23,50 ²	1	333,34	10	5,7	83,33	5	8	4	7	11	7
SLHCM-A-0150-M	1,5	1000,00	999,5	15	200	5,0000	25	23,50 ²	1	833,34	10	5,7	83,33	11	8	4	7	11	7
SLHCM-A-0200-S	2	500,00	499,5	20	75	6,6666	30	28,00 ²	2	333,34	10	5,7	83,33	5	8	6	7	11	7
SLHCM-A-0200-M	2	1000,00	999,5	20	150	6,6666	30	28,00 ²	2	833,34	10	5,7	83,33	11	8	6	7	11	7
SLHCM-A-0250-S	2,5	500,00	499,5	20	60	8,3333	30	27,50 ²	2	333,34	10	5,7	83,33	5	8	6	7	11	7
SLHCM-A-0250-M	2,5	1000,00	999,5	20	120	8,3333	30	27,50 ²	2	833,34	10	5,7	83,33	11	8	6	7	11	7
SLHCM-A-0300-S	3	500,00	499,5	30	50	10,0000	40	37,00 ²	2	333,34	15	7,7	83,33	5	10	10	10	15	9
SLHCM-A-0300-M	3	1000,00	999,5	30	100	10,0000	40	37,00 ²	2	833,34	15	7,7	83,33	11	10	10	10	15	9
SLHCM-A-0400-S	4	506,67	506,0	36	38	13,3333	50	45,45 ²	3	337,79	20	9,7	84,44	5	12	11	12	18	11
SLHCM-A-0400-M	4	1013,33	1012,5	36	76	13,3333	50	45,45 ²	3	844,45	20	9,7	84,44	11	12	11	12	18	11
SLHCM-A-0400-L	4	1520,00	1519,5	36	114	13,3333	50	45,45 ²	3	1351,12	20	9,7	84,44	17	12	11	12	18	11
SLHCM-A-0500-S	5	500,00	499,5	50	30	16,6666	65	59,28 ³	3	333,34	25	11,7	83,33	5	14	19	14	20	13
SLHCM-A-0500-M	5	1000,00	999,5	50	60	16,6666	65	59,28 ³	3	833,34	25	11,7	83,33	11	14	19	14	20	13
SLHCM-A-0500-L	5	1500,00	1499,5	50	90	16,6666	65	59,28 ³	3	1333,34	25	11,7	83,33	17	14	19	14	20	13
SLHCM-A-0600-S	6	500,00	499,5	55	25	20,0000	75	68,15 ³	3	333,34	30	11,7	83,33	5	17	20	18	26	17
SLHCM-A-0600-M	6	1000,00	999,5	55	50	20,0000	75	68,15 ³	3	833,34	30	11,7	83,33	11	17	20	18	26	17
SLHCM-A-0600-L	6	1500,00	1499,5	55	75	20,0000	75	68,15 ³	3	1333,34	30	11,7	83,33	17	17	20	18	26	17
SLHCM-A-0800-S	8	506,67	506,0	80	19	26,6666	95	85,9 ³	4	337,79	35	13,7	84,44	5	17	34	18	26	17
SLHCM-A-0800-M	8	1013,33	1012,5	80	38	26,6666	95	85,9 ³	4	844,45	35	13,7	84,44	11	17	34	18	26	17
SLHCM-A-1000-S	10	500,00	499,0	100	15	33,3333	105	93,6 ³	4	300,00	40	15,5	100,00	4	24	31	22	33	25
SLHCM-A-1000-M	10	1000,00	999,0	100	30	33,3333	105	93,6 ³	4	800,00	40	15,5	100,00	9	24	31	22	33	25
SLHCM-A-1200-S	12	600,00	599,0	120	15	40,0000	125	111,35 ³	4	360,00	48	19,5	120,00	4	30	36	22	33	25
SLHCM-A-1200-M	12	1200,00	1198,0	120	30	40,0000	125	111,35 ³	4	960,00	48	19,5	120,00	9	30	36	22	33	25

All dimensions in millimetres

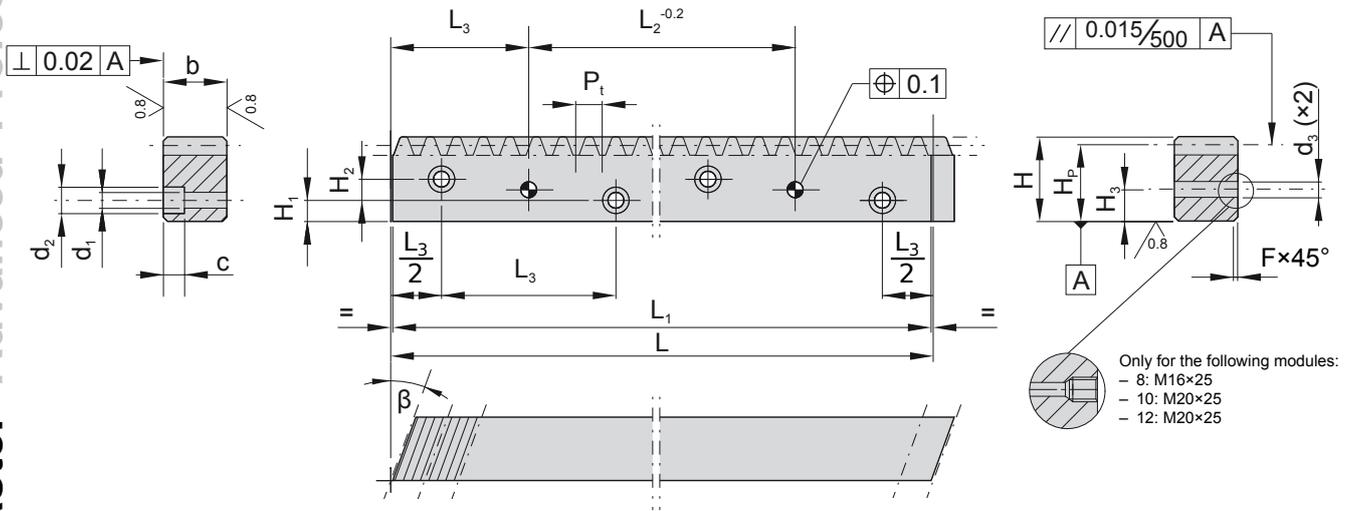
¹ Number of Teeth

² Tolerance -0,02 / -0,05

³ Tolerance -0,02 / -0,07

Rack with helical teeth
With holes for continuous linking
All faces ground
Optimized profile, cooler, quieter

Material: 18CrNiMo5
Tooth: Helical, ground, with tip-relief.
Case hardened and tempered, HRC 60-62
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
Pitch error: Module ≤ 8 : $f_{pt}=3 \mu\text{m}$, cumulative $F_{p250}=9 \mu\text{m}$
Module ≥ 10 : $f_{pt}=5 \mu\text{m}$, cumulative $F_{p250}=13 \mu\text{m}$
Quality: Module ≤ 8 : 5 DIN 3962/63/67
Module ≥ 10 : 6 DIN 3962/63/67



Ordering Code	Module	L	L ₁	b	Z ¹	P _t	H	H _p	F	L ₂	H ₃	d ₃	L ₃	n	H ₁	H ₂	d ₁	d ₂	c
SLHCM-M-0100-S	1	500,00	499,5	10	150	3,3333	25	24,00 ²	1	333,34	10	4,7	83,33	5	8	4	6	10	6
SLHCM-M-0100-M	1	1000,00	999,5	10	300	3,3333	25	24,00 ²	1	833,34	10	4,7	83,33	11	8	4	6	10	6
SLHCM-M-0125-S	1,25	500,00	499,5	10	120	4,1666	25	23,75 ²	1	333,34	10	4,7	83,33	5	8	4	6	10	6
SLHCM-M-0125-M	1,25	1000,00	999,5	10	240	4,1666	25	23,75 ²	1	833,34	10	4,7	83,33	11	8	4	6	10	6
SLHCM-M-0150-S	1,5	500,00	499,5	15	100	5,000	25	23,50 ²	1	333,34	10	5,7	83,33	5	8	4	7	11	7
SLHCM-M-0150-M	1,5	1000,00	999,5	15	200	5,000	25	23,50 ²	1	833,34	10	5,7	83,33	11	8	4	7	11	7
SLHCM-M-0200-S	2	500,00	499,5	20	75	6,6666	30	28,00 ²	2	333,34	10	5,7	83,33	5	8	6	7	11	7
SLHCM-M-0200-M	2	1000,00	999,5	20	150	6,6666	30	28,00 ²	2	833,34	10	5,7	83,33	11	8	6	7	11	7
SLHCM-M-0250-S	2,5	500,00	499,5	20	60	8,3333	30	27,50 ²	2	333,34	10	5,7	83,33	5	8	6	7	11	7
SLHCM-M-0250-M	2,5	1000,00	999,5	20	120	8,3333	30	27,50 ²	2	833,34	10	5,7	83,33	11	8	6	7	11	7
SLHCM-M-0300-S	3	500,00	499,5	30	50	10,0000	40	37,00 ²	2	333,34	15	7,7	83,33	5	10	10	10	15	9
SLHCM-M-0300-M	3	1000,00	999,5	30	100	10,0000	40	37,00 ²	2	833,34	15	7,7	83,33	11	10	10	10	15	9
SLHCM-M-0400-S	4	506,67	506,0	36	38	13,3333	50	45,45 ²	3	337,79	20	9,7	84,44	5	12	11	12	18	11
SLHCM-M-0400-M	4	1013,33	1012,5	36	76	13,3333	50	45,45 ²	3	844,45	20	9,7	84,44	11	12	11	12	18	11
SLHCM-M-0400-L	4	1520,00	1519,5	36	114	13,3333	50	45,45 ²	3	1351,12	20	9,7	84,44	17	12	11	12	18	11
SLHCM-M-0500-S	5	500,00	499,5	50	30	16,6666	65	59,28 ³	3	333,34	25	11,7	83,33	5	14	19	14	20	13
SLHCM-M-0500-M	5	1000,00	999,5	50	60	16,6666	65	59,28 ³	3	833,34	25	11,7	83,33	11	14	19	14	20	13
SLHCM-M-0500-L	5	1500,00	1499,5	50	90	16,6666	65	59,28 ³	3	1333,34	25	11,7	83,33	17	14	19	14	20	13
SLHCM-M-0600-S	6	500,00	499,5	55	25	20,0000	75	68,15 ³	3	333,34	30	11,7	83,33	5	17	20	18	26	17
SLHCM-M-0600-M	6	1000,00	999,5	55	50	20,0000	75	68,15 ³	3	833,34	30	11,7	83,33	11	17	20	18	26	17
SLHCM-M-0600-L	6	1500,00	1499,5	55	75	20,0000	75	68,15 ³	3	1333,34	30	11,7	83,33	17	17	20	18	26	17
SLHCM-M-0800-S	8	506,67	506,0	80	19	26,6666	95	85,9 ³	4	337,79	35	13,7	84,44	5	17	34	18	26	17
SLHCM-M-0800-M	8	1013,33	1012,5	80	38	26,6666	95	85,9 ³	4	844,45	35	13,7	84,44	11	17	34	18	26	17
SLHCM-M-1000-S	10	500,00	499,0	100	15	33,3333	105	93,6 ³	4	300,00	40	15,5	100,00	4	24	31	22	33	25
SLHCM-M-1000-M	10	1000,00	999,0	100	30	33,3333	105	93,6 ³	4	800,00	40	15,5	100,00	9	24	31	22	33	25
SLHCM-M-1200-S	12	600,00	599,0	120	15	40,0000	125	111,35 ³	4	360,00	48	19,5	120,00	4	30	36	22	33	25
SLHCM-M-1200-M	12	1200,00	1198,0	120	30	40,0000	125	111,35 ³	4	960,00	48	19,5	120,00	9	30	36	22	33	25

All dimensions in millimetres

¹ Number of Teeth

² Tolerance -0,02 / -0,05

³ Tolerance -0,02 / -0,07

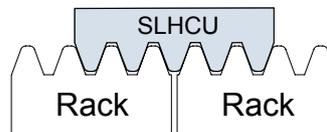
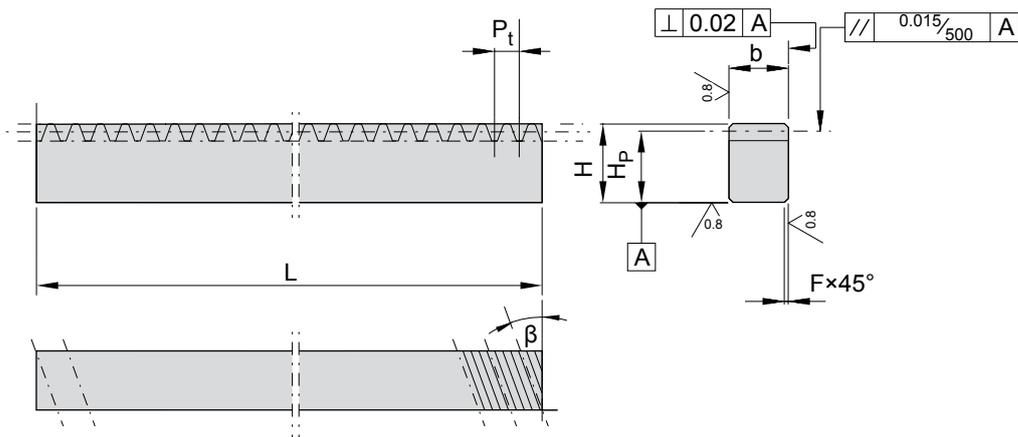
Assembly rack with helical teeth

Without holes

All faces ground

Optimized profile, cooler, quieter

- Material:** C45
- Tooth:** Helical, ground, with tip-relief.
Induction hardened and tempered, HRC 58-60
Pressure angle (α): 20°
Helix angle (β): 19°31'42", right-handed
- Pitch error:** $f_{pt}=3 \mu\text{m}$, cumulative $F_p=0.035 \text{ mm/m}$
- Quality:** 5 DIN 3962/63/67



Basic Classic Professional Advanced Master

Ordering Code	Module	L	b	P _t	H	F
SLHCU-0100	1	100	10	3,3333	10	1
SLHCU-0125	1,25	100	10	4,1666	10	1
SLHCU-0150	1,50	100	10	5,0000	15	1
SLHCU-0200	2	150	20	6,6666	20	2
SLHCU-0250	2,50	150	20	8,3333	20	2
SLHCU-0300	3	150	30	10,0000	30	2
SLHCU-0400	4	200	30	13,3333	30	3
SLHCU-0500	5	200	50	16,6666	50	3
SLHCU-0600	6	200	50	20,0000	50	3
SLHCU-0800	8	250	80	26,6666	50	4
SLHCU-1000	10	250	100	33,3333	50	4
SLHCU-1200	12	300	120	40,0000	70	4

All dimensions in millimetres

Pinion with helical teeth, module 1

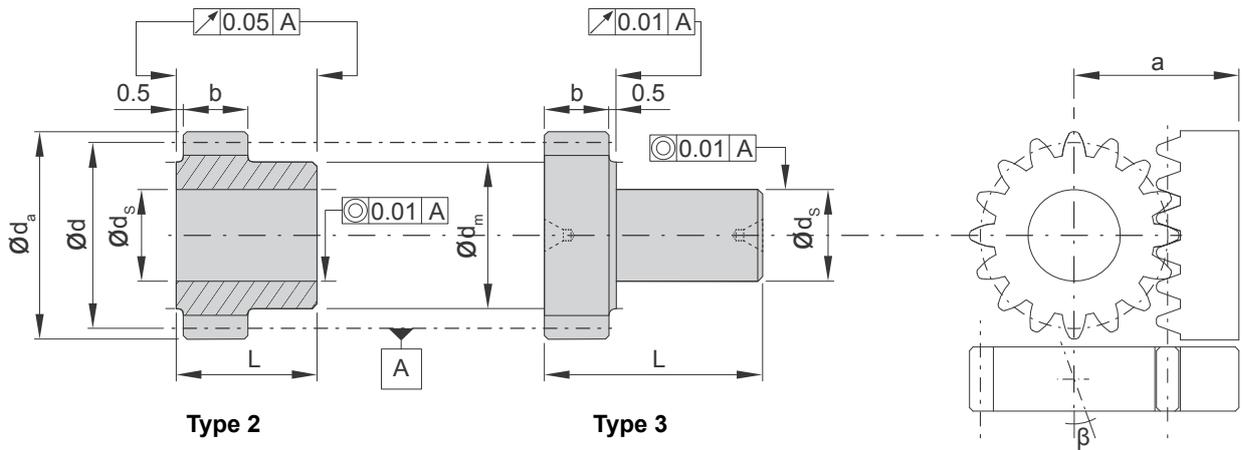
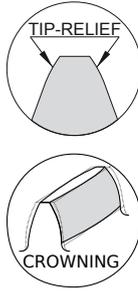
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Other Servotak Products
Planetary gearboxes ranging from 4 to 20000 N·m

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-0100-18-2-U	Basic & Advanced & Master	2	18	20,10	22,1	10	6 ^{H6}	8 ^{H6}	15	20	34,12
SLHP-0100-18-3-U	Basic & Advanced & Master	3	18	20,10	22,1	10	8 ^{h6}	-	15	40	34,12
SLHP-0100-18-2-P	Classic	2	18	20,10	22,1	19	6 ^{H6}	8 ^{H6}	15	20	
SLHP-0100-18-3-P	Classic	3	18	20,10	22,1	19	8 ^{h6}	-	15	40	
SLHP-0100-20-2-U	Basic & Advanced & Master	2	20	22,22	24,2	10	6 ^{H6}	8 ^{H6}	17	20	35,19
SLHP-0100-20-3-U	Basic & Advanced & Master	3	20	22,22	24,2	10	10 ^{h6}	-	17	40	35,19
SLHP-0100-20-2-P	Classic	2	20	22,22	24,2	19	6 ^{H6}	8 ^{H6}	17	20	
SLHP-0100-20-3-P	Classic	3	20	22,22	24,2	19	10 ^{h6}	-	17	40	
SLHP-0100-22-2-U	Basic & Advanced & Master	2	22	24,34	26,3	10	6 ^{H6}	10 ^{H6}	19	20	36,25
SLHP-0100-22-3-U	Basic & Advanced & Master	3	22	24,34	26,3	10	10 ^{h6}	-	19	50	36,25
SLHP-0100-22-2-P	Classic	2	22	24,34	26,3	19	6 ^{H6}	10 ^{H6}	19	20	
SLHP-0100-22-3-P	Classic	3	22	24,34	26,3	19	10 ^{h6}	-	19	50	
SLHP-0100-24-2-U	Basic & Advanced & Master	2	24	26,46	28,5	10	8 ^{H6}	12 ^{H6}	21	20	37,31
SLHP-0100-24-3-U	Basic & Advanced & Master	3	24	26,46	28,5	10	12 ^{h6}	-	21	50	37,31
SLHP-0100-24-2-P	Classic	2	24	26,46	28,5	19	8 ^{H6}	12 ^{H6}	21	20	
SLHP-0100-24-3-P	Classic	3	24	26,46	28,5	19	12 ^{h6}	-	21	50	
SLHP-0100-25-2-U	Basic & Advanced & Master	2	25	27,52	29,5	10	8 ^{H6}	12 ^{H6}	22	20	37,84
SLHP-0100-25-3-U	Basic & Advanced & Master	3	25	27,52	29,5	10	12 ^{h6}	-	22	50	37,84
SLHP-0100-25-2-P	Classic	2	25	27,52	29,5	19	8 ^{H6}	12 ^{H6}	22	20	
SLHP-0100-25-3-P	Classic	3	25	27,52	29,5	19	12 ^{h6}	-	22	50	
SLHP-0100-27-2-U	Basic & Advanced & Master	2	27	29,65	31,6	10	10 ^{H6}	15 ^{H6}	24	20	38,90
SLHP-0100-27-3-U	Basic & Advanced & Master	3	27	29,65	31,6	10	12 ^{h6}	-	24	50	38,90
SLHP-0100-27-2-P	Classic	2	27	29,65	31,6	19	10 ^{H6}	15 ^{H6}	24	20	
SLHP-0100-27-3-P	Classic	3	27	29,65	31,6	19	12 ^{h6}	-	24	50	
SLHP-0100-30-2-U	Basic & Advanced & Master	2	30	32,83	34,8	10	10 ^{H6}	16 ^{H6}	27	22	40,49
SLHP-0100-30-3-U	Basic & Advanced & Master	3	30	32,83	34,8	10	14 ^{h6}	-	27	50	40,49
SLHP-0100-30-2-P	Classic	2	30	32,83	34,8	19	10 ^{H6}	16 ^{H6}	27	22	
SLHP-0100-30-3-P	Classic	3	30	32,83	34,8	19	14 ^{h6}	-	27	50	
SLHP-0100-32-2-U	Basic & Advanced & Master	2	32	34,95	37,0	10	10 ^{H6}	18 ^{H6}	29	22	41,55
SLHP-0100-32-3-U	Basic & Advanced & Master	3	32	34,95	37,0	10	16 ^{h6}	-	29	50	41,55
SLHP-0100-32-2-P	Classic	2	32	34,95	37,0	19	10 ^{H6}	18 ^{H6}	29	22	
SLHP-0100-32-3-P	Classic	3	32	34,95	37,0	19	16 ^{h6}	-	29	50	
SLHP-0100-35-2-U	Basic & Advanced & Master	2	35	38,14	40,1	10	10 ^{H6}	20 ^{H6}	32	22	43,14
SLHP-0100-35-3-U	Basic & Advanced & Master	3	35	38,14	40,1	10	16 ^{h6}	-	32	50	43,14
SLHP-0100-35-2-P	Classic	2	35	38,14	40,1	19	10 ^{H6}	20 ^{H6}	32	22	
SLHP-0100-35-3-P	Classic	3	35	38,14	40,1	19	16 ^{h6}	-	32	50	

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 1.25

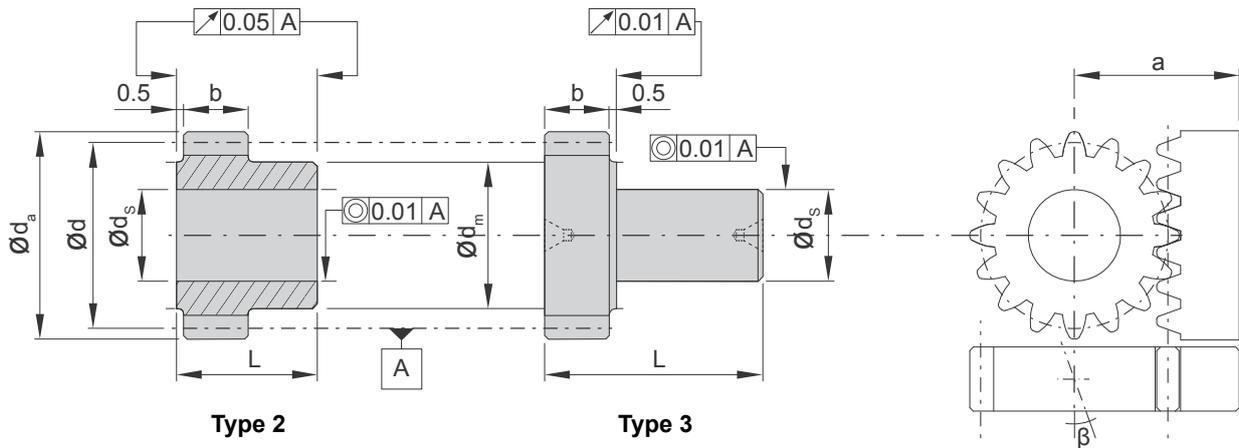
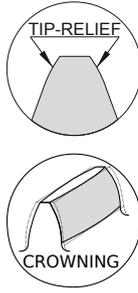
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-0125-18-2-U	Basic & Advanced & Master	2	18	25,12	27,6	10	8 ^{H6}	10 ^{H6}	19	20	36,38
SLHP-0125-18-3-U	Basic & Advanced & Master	3	18	25,12	27,6	10	10 ^{h6}	-	19	40	36,38
SLHP-0125-20-2-U	Basic & Advanced & Master	2	20	27,77	30,3	10	8 ^{H6}	12 ^{H6}	22	20	37,71
SLHP-0125-20-3-U	Basic & Advanced & Master	3	20	27,77	30,3	10	10 ^{h6}	-	22	40	37,71
SLHP-0125-22-2-U	Basic & Advanced & Master	2	22	30,43	32,9	10	10 ^{H6}	15 ^{H6}	24	20	39,04
SLHP-0125-22-3-U	Basic & Advanced & Master	3	22	30,43	32,9	10	12 ^{h6}	-	24	45	39,04
SLHP-0125-24-2-U	Basic & Advanced & Master	2	24	33,08	35,6	10	10 ^{H6}	15 ^{H6}	27	20	40,36
SLHP-0125-24-3-U	Basic & Advanced & Master	3	24	33,08	35,6	10	12 ^{h6}	-	27	45	40,36
SLHP-0125-25-2-U	Basic & Advanced & Master	2	25	34,41	36,9	10	10 ^{H6}	17 ^{H6}	28	20	41,03
SLHP-0125-25-3-U	Basic & Advanced & Master	3	25	34,41	36,9	10	14 ^{h6}	-	28	50	41,03
SLHP-0125-27-2-U	Basic & Advanced & Master	2	27	37,06	39,6	10	12 ^{H6}	20 ^{H6}	31	25	42,35
SLHP-0125-27-3-U	Basic & Advanced & Master	3	27	37,06	39,6	10	14 ^{h6}	-	31	50	42,35
SLHP-0125-30-2-U	Basic & Advanced & Master	2	30	41,04	43,5	10	12 ^{H6}	22 ^{H6}	34	25	44,34
SLHP-0125-30-3-U	Basic & Advanced & Master	3	30	41,04	43,5	10	16 ^{h6}	-	34	55	44,34
SLHP-0125-32-2-U	Basic & Advanced & Master	2	32	43,70	46,2	10	12 ^{H6}	24 ^{H6}	36	25	45,67
SLHP-0125-32-3-U	Basic & Advanced & Master	3	32	43,70	46,2	10	18 ^{h6}	-	36	60	45,67
SLHP-0125-35-2-U	Basic & Advanced & Master	2	35	47,67	50,2	10	15 ^{H6}	26 ^{H6}	40	25	47,66
SLHP-0125-35-3-U	Basic & Advanced & Master	3	35	47,67	50,2	10	20 ^{h6}	-	40	60	47,66

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 1.5

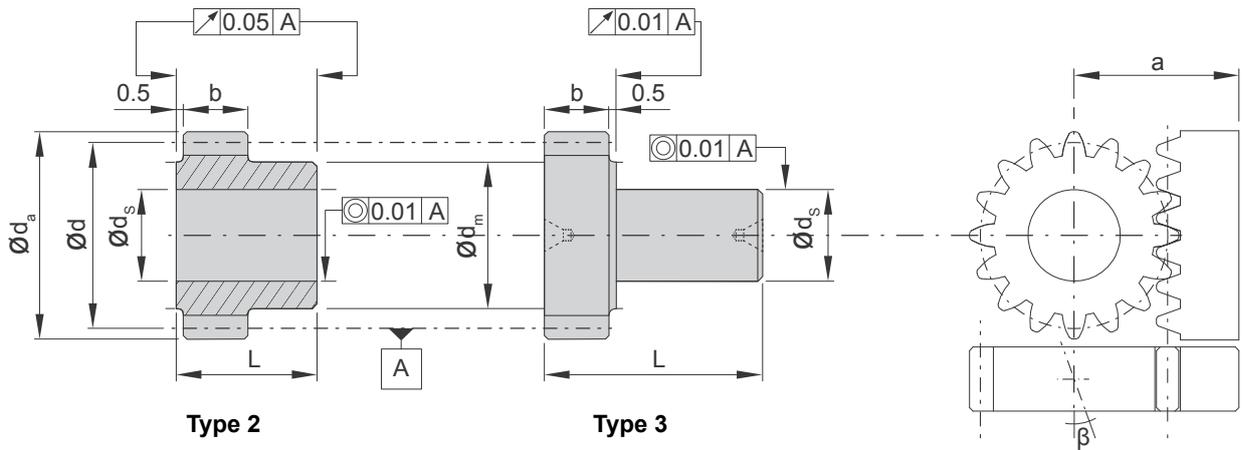
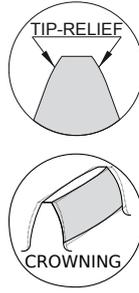
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _S	d _{S max}	d _m	L	a ²
SLHP-0150-18-2-U	Basic & Advanced & Master	2	18	30,15	33,1	15	10 ^{H6}	14 ^{H6}	24	28	38,65
SLHP-0150-18-3-U	Basic & Advanced & Master	3	18	30,15	33,1	15	14 ^{h6}	-	24	60	38,65
SLHP-0150-18-2-P	Classic	2	18	30,15	33,1	19	10 ^{H6}	14 ^{H6}	24	28	
SLHP-0150-18-3-P	Classic	3	18	30,15	33,1	19	14 ^{h6}	-	24	60	
SLHP-0150-20-2-U	Basic & Advanced & Master	2	20	33,33	36,3	15	10 ^{H6}	16 ^{H6}	27	28	40,24
SLHP-0150-20-3-U	Basic & Advanced & Master	3	20	33,33	36,3	15	14 ^{h6}	-	27	60	40,24
SLHP-0150-20-2-P	Classic	2	20	33,33	36,3	19	10 ^{H6}	16 ^{H6}	27	28	
SLHP-0150-20-3-P	Classic	3	20	33,33	36,3	19	14 ^{h6}	-	27	60	
SLHP-0150-22-2-U	Basic & Advanced & Master	2	22	36,51	39,5	15	10 ^{H6}	18 ^{H6}	30	28	41,83
SLHP-0150-22-3-U	Basic & Advanced & Master	3	22	36,51	39,5	15	16 ^{h6}	-	30	60	41,83
SLHP-0150-22-2-P	Classic	2	22	36,51	39,5	19	10 ^{H6}	18 ^{H6}	30	28	
SLHP-0150-22-3-P	Classic	3	22	36,51	39,5	19	16 ^{h6}	-	30	60	
SLHP-0150-24-2-U	Basic & Advanced & Master	2	24	39,70	42,7	15	10 ^{H6}	20 ^{H6}	33	28	43,42
SLHP-0150-24-3-U	Basic & Advanced & Master	3	24	39,70	42,7	15	16 ^{h6}	-	33	60	43,42
SLHP-0150-24-2-P	Classic	2	24	39,70	42,7	19	10 ^{H6}	20 ^{H6}	33	28	
SLHP-0150-24-3-P	Classic	3	24	39,70	42,7	19	16 ^{h6}	-	33	60	
SLHP-0150-25-2-U	Basic & Advanced & Master	2	25	41,29	44,3	15	10 ^{H6}	20 ^{H6}	34	28	44,22
SLHP-0150-25-3-U	Basic & Advanced & Master	3	25	41,29	44,3	15	18 ^{h6}	-	34	60	44,22
SLHP-0150-25-2-P	Classic	2	25	41,29	44,3	19	10 ^{H6}	20 ^{H6}	34	28	
SLHP-0150-25-3-P	Classic	3	25	41,29	44,3	19	18 ^{h6}	-	34	60	
SLHP-0150-27-2-U	Basic & Advanced & Master	2	27	44,47	47,5	15	15 ^{H6}	22 ^{H6}	37	30	45,81
SLHP-0150-27-3-U	Basic & Advanced & Master	3	27	44,47	47,5	15	20 ^{h6}	-	37	65	45,81
SLHP-0150-27-2-P	Classic	2	27	44,47	47,5	19	15 ^{H6}	22 ^{H6}	37	30	
SLHP-0150-27-3-P	Classic	3	27	44,47	47,5	19	20 ^{h6}	-	37	65	
SLHP-0150-30-2-U	Basic & Advanced & Master	2	30	49,25	52,2	15	15 ^{H6}	26 ^{H6}	42	30	48,20
SLHP-0150-30-3-U	Basic & Advanced & Master	3	30	49,25	52,2	15	20 ^{h6}	-	42	65	48,20
SLHP-0150-30-2-P	Classic	2	30	49,25	52,2	19	15 ^{H6}	26 ^{H6}	42	30	
SLHP-0150-30-3-P	Classic	3	30	49,25	52,2	19	20 ^{h6}	-	42	65	
SLHP-0150-32-2-U	Basic & Advanced & Master	2	32	52,43	55,4	15	15 ^{H6}	28 ^{H6}	45	30	49,79
SLHP-0150-32-3-U	Basic & Advanced & Master	3	32	52,43	55,4	15	25 ^{h6}	-	45	70	49,79
SLHP-0150-32-2-P	Classic	2	32	52,43	55,4	19	15 ^{H6}	28 ^{H6}	45	30	
SLHP-0150-32-3-P	Classic	3	32	52,43	55,4	19	25 ^{h6}	-	45	70	
SLHP-0150-35-2-U	Basic & Advanced & Master	2	35	57,20	60,2	15	15 ^{H6}	30 ^{H6}	49	30	52,18
SLHP-0150-35-3-U	Basic & Advanced & Master	3	35	57,20	60,2	15	25 ^{h6}	-	49	70	52,18
SLHP-0150-35-2-P	Classic	2	35	57,20	60,2	19	15 ^{H6}	30 ^{H6}	49	30	
SLHP-0150-35-3-P	Classic	3	35	57,20	60,2	19	25 ^{h6}	-	49	70	

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 2

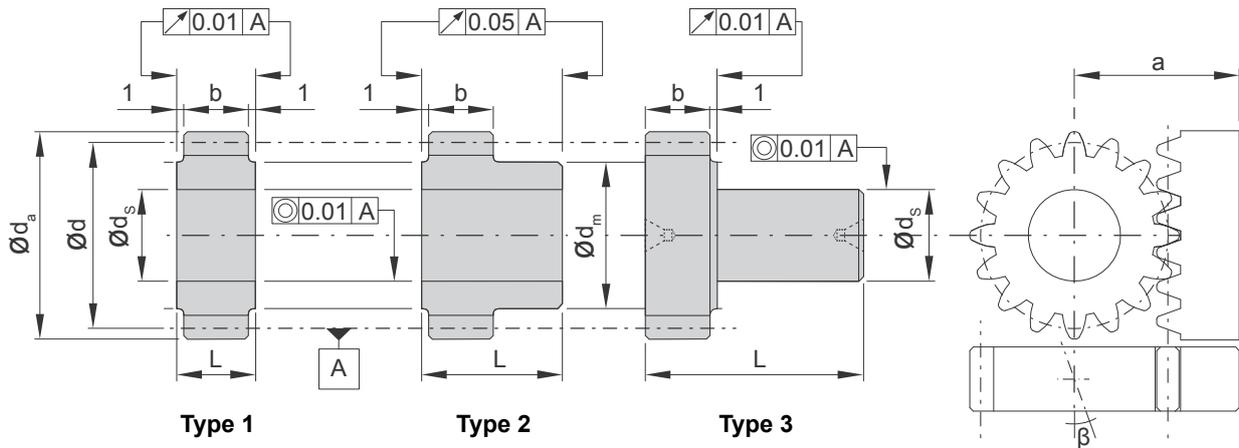
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Basic Classic Professional Advanced Master

Servotak Engineering Calculator

Visit http://servotak.eu/tools/engineering_calculator to calculate tangential, radial and axial forces on pinions.

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-0200-16-1-U	Basic & Advanced & Master	1	16	33,95	40,0	20	12 ^{H6}	26 ^{H6}	28	22	46,08
SLHP-0200-16-2-U	Basic & Advanced & Master	2	16	33,95	40,0	20	12 ^{H6}	15 ^{H6}	28	35	46,08
SLHP-0200-16-3-U	Basic & Advanced & Master	3	16	33,95	40,0	20	20 ^{h6}	-	28	65	46,08
SLHP-0200-16-1-P	Classic & Professional	1	16	33,95	40,1	24	12 ^{H6}	26 ^{H6}	28	22	40,08
SLHP-0200-16-2-P	Classic & Professional	2	16	33,95	40,1	24	12 ^{H6}	15 ^{H6}	28	35	40,08
SLHP-0200-16-3-P	Classic & Professional	3	16	33,95	40,1	24	20 ^{h6}	-	28	65	40,08
SLHP-0200-18-1-U	Basic & Advanced & Master	1	18	38,20	44,2	20	15 ^{H6}	28 ^{H6}	30	22	48,20
SLHP-0200-18-2-U	Basic & Advanced & Master	2	18	38,20	44,2	20	15 ^{H6}	18 ^{H6}	30	35	48,20
SLHP-0200-18-3-U	Basic & Advanced & Master	3	18	38,20	44,2	20	20 ^{h6}	-	30	65	48,20
SLHP-0200-18-1-P	Classic & Professional	1	18	38,20	44,4	24	15 ^{H6}	28 ^{H6}	30	22	42,20
SLHP-0200-18-2-P	Classic & Professional	2	18	38,20	44,4	24	15 ^{H6}	18 ^{H6}	30	35	42,20
SLHP-0200-18-3-P	Classic & Professional	3	18	38,20	44,4	24	20 ^{h6}	-	30	65	42,20
SLHP-0200-20-1-U	Basic & Advanced & Master	1	20	42,44	48,4	20	15 ^{H6}	33 ^{H6}	35	22	50,32
SLHP-0200-20-2-U	Basic & Advanced & Master	2	20	42,44	48,4	20	15 ^{H6}	22 ^{H6}	35	35	50,32
SLHP-0200-20-3-U	Basic & Advanced & Master	3	20	42,44	48,4	20	25 ^{h6}	-	35	75	50,32
SLHP-0200-20-1-P	Classic & Professional	1	20	42,44	48,5	24	15 ^{H6}	33 ^{H6}	35	22	44,30
SLHP-0200-20-2-P	Classic & Professional	2	20	42,44	48,5	24	15 ^{H6}	22 ^{H6}	35	35	44,30
SLHP-0200-20-3-P	Classic & Professional	3	20	42,44	48,5	24	25 ^{h6}	-	35	75	44,30
SLHP-0200-21-1-U	Basic & Advanced & Master	1	21	44,56	50,6	20	15 ^{H6}	35 ^{H6}	37	22	51,38
SLHP-0200-21-2-U	Basic & Advanced & Master	2	21	44,56	50,6	20	15 ^{H6}	24 ^{H6}	37	35	51,38
SLHP-0200-21-3-U	Basic & Advanced & Master	3	21	44,56	50,6	20	25 ^{h6}	-	37	75	51,38
SLHP-0200-21-1-P	Classic & Professional	1	21	44,56	50,6	24	15 ^{H6}	35 ^{H6}	37	22	45,30
SLHP-0200-21-2-P	Classic & Professional	2	21	44,56	50,6	24	15 ^{H6}	24 ^{H6}	37	35	45,30
SLHP-0200-21-3-P	Classic & Professional	3	21	44,56	50,6	24	25 ^{h6}	-	37	75	45,30
SLHP-0200-22-1-U	Basic & Advanced & Master	1	22	46,69	52,7	20	15 ^{H6}	37 ^{H6}	39	22	52,45
SLHP-0200-22-2-U	Basic & Advanced & Master	2	22	46,69	52,7	20	15 ^{H6}	26 ^{H6}	39	35	52,45
SLHP-0200-22-3-U	Basic & Advanced & Master	3	22	46,69	52,7	20	25 ^{h6}	-	39	75	52,45
SLHP-0200-22-1-P	Classic & Professional	1	22	46,69	52,7	24	15 ^{H6}	37 ^{H6}	39	22	46,35
SLHP-0200-22-2-P	Classic & Professional	2	22	46,69	52,7	24	15 ^{H6}	26 ^{H6}	39	35	46,35
SLHP-0200-22-3-P	Classic & Professional	3	22	46,69	52,7	24	25 ^{h6}	-	39	75	46,35
SLHP-0200-24-1-U	Basic & Advanced & Master	1	24	50,93	56,9	20	15 ^{H6}	40 ^{H6}	42	22	54,57
SLHP-0200-24-2-U	Basic & Advanced & Master	2	24	50,93	56,9	20	15 ^{H6}	30 ^{H6}	42	40	54,57
SLHP-0200-24-3-U	Basic & Advanced & Master	3	24	50,93	56,9	20	25 ^{h6}	-	42	75	54,57
SLHP-0200-24-1-P	Classic & Professional	1	24	50,93	56,9	24	15 ^{H6}	40 ^{H6}	42	22	48,50
SLHP-0200-24-2-P	Classic & Professional	2	24	50,93	56,9	24	15 ^{H6}	30 ^{H6}	42	40	48,50
SLHP-0200-24-3-P	Classic & Professional	3	24	50,93	56,9	24	25 ^{h6}	-	42	75	48,50
SLHP-0200-25-1-U	Basic & Advanced & Master	1	25	53,05	59,1	20	15 ^{H6}	42 ^{H6}	44	22	55,63
SLHP-0200-25-2-U	Basic & Advanced & Master	2	25	53,05	59,1	20	15 ^{H6}	32 ^{H6}	44	40	55,63
SLHP-0200-25-3-U	Basic & Advanced & Master	3	25	53,05	59,1	20	25 ^{h6}	-	44	75	55,63
SLHP-0200-25-1-P	Classic & Professional	1	25	53,05	59,1	24	15 ^{H6}	42 ^{H6}	44	22	49,55
SLHP-0200-25-2-P	Classic & Professional	2	25	53,05	59,1	24	15 ^{H6}	32 ^{H6}	44	40	49,55
SLHP-0200-25-3-P	Classic & Professional	3	25	53,05	59,1	24	25 ^{h6}	-	44	75	49,55
SLHP-0200-26-1-U	Basic & Advanced & Master	1	26	55,17	61,2	20	15 ^{H6}	46 ^{H6}	48	22	56,69
SLHP-0200-26-2-U	Basic & Advanced & Master	2	26	55,17	61,2	20	15 ^{H6}	34 ^{H6}	48	40	56,69
SLHP-0200-26-3-U	Basic & Advanced & Master	3	26	55,17	61,2	20	28 ^{h6}	-	48	85	56,69
SLHP-0200-26-1-P	Classic & Professional	1	26	55,17	61,2	24	15 ^{H6}	46 ^{H6}	48	22	50,60
SLHP-0200-26-2-P	Classic & Professional	2	26	55,17	61,2	24	15 ^{H6}	34 ^{H6}	48	40	50,60
SLHP-0200-26-3-P	Classic & Professional	3	26	55,17	61,2	24	28 ^{h6}	-	48	85	50,60
SLHP-0200-28-1-U	Basic & Advanced & Master	1	28	59,42	65,4	20	15 ^{H6}	48 ^{H6}	50	22	58,81
SLHP-0200-28-2-U	Basic & Advanced & Master	2	28	59,42	65,4	20	15 ^{H6}	35 ^{H6}	50	40	58,81
SLHP-0200-28-3-U	Basic & Advanced & Master	3	28	59,42	65,4	20	28 ^{h6}	-	50	85	58,81
SLHP-0200-28-1-P	Classic & Professional	1	28	59,42	65,4	24	15 ^{H6}	48 ^{H6}	50	22	52,75
SLHP-0200-28-2-P	Classic & Professional	2	28	59,42	65,4	24	15 ^{H6}	35 ^{H6}	50	40	52,75
SLHP-0200-28-3-P	Classic & Professional	3	28	59,42	65,4	24	28 ^{h6}	-	50	85	52,75
SLHP-0200-30-1-U	Basic & Advanced & Master	1	30	63,66	69,7	20	15 ^{H6}	52 ^{H6}	54	22	60,93
SLHP-0200-30-2-U	Basic & Advanced & Master	2	30	63,66	69,7	20	15 ^{H6}	38 ^{H6}	54	40	60,93
SLHP-0200-30-3-U	Basic & Advanced & Master	3	30	63,66	69,7	20	30 ^{h6}	-	54	85	60,93
SLHP-0200-30-1-P	Classic & Professional	1	30	63,66	69,7	24	15 ^{H6}	52 ^{H6}	54	22	54,90
SLHP-0200-30-2-P	Classic & Professional	2	30	63,66	69,7	24	15 ^{H6}	38 ^{H6}	54	40	54,90
SLHP-0200-30-3-P	Classic & Professional	3	30	63,66	69,7	24	30 ^{h6}	-	54	85	54,90

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 2.5

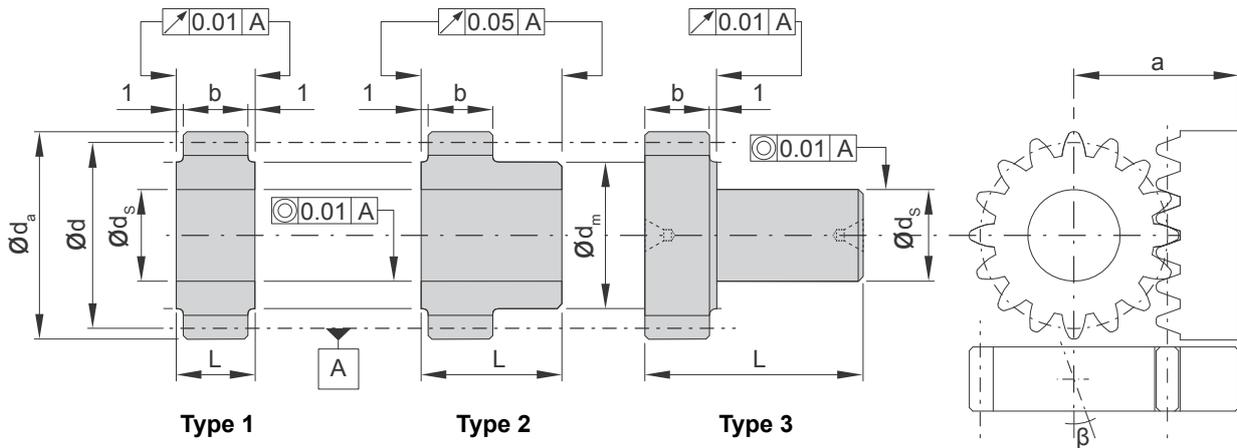
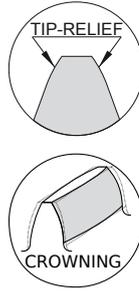
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Basic Classic Professional Advanced Master

Other Servotak Products

MQ Series Gearboxes

Compact and precise right angle gearboxes that can be installed in the rack's direction



Master Advanced Professional Classic Basic

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²	
SLHP-0250-16-1-U	Basic & Advanced & Master		1	16	44,94	49,9	20	15 ^{H6}	18 ^{H6}	35	22	50,12
SLHP-0250-16-2-U	Basic & Advanced & Master		2	16	44,94	49,9	20	15 ^{H6}	18 ^{H6}	35	35	50,12
SLHP-0250-16-3-U	Basic & Advanced & Master		3	16	44,94	49,9	20	20 ^{h6}	-	35	75	50,12
SLHP-0250-16-1-P	Classic		1	16	44,94	49,9	29	15 ^{H6}	18 ^{H6}	35	22	
SLHP-0250-16-2-P	Classic		2	16	44,94	49,9	29	15 ^{H6}	18 ^{H6}	35	35	
SLHP-0250-16-3-P	Classic		3	16	44,94	49,9	29	20 ^{h6}	-	35	75	
SLHP-0250-18-1-U	Basic & Advanced & Master		1	18	50,25	55,2	20	15 ^{H6}	22 ^{H6}	40	22	52,77
SLHP-0250-18-2-U	Basic & Advanced & Master		2	18	50,25	55,2	20	15 ^{H6}	22 ^{H6}	40	35	52,77
SLHP-0250-18-3-U	Basic & Advanced & Master		3	18	50,25	55,2	20	20 ^{h6}	-	40	75	52,77
SLHP-0250-18-1-P	Classic		1	18	50,25	55,2	29	15 ^{H6}	22 ^{H6}	40	22	
SLHP-0250-18-2-P	Classic		2	18	50,25	55,2	29	15 ^{H6}	22 ^{H6}	40	35	
SLHP-0250-18-3-P	Classic		3	18	50,25	55,2	29	20 ^{h6}	-	40	75	
SLHP-0250-20-1-U	Basic & Advanced & Master		1	20	55,55	60,6	20	15 ^{H6}	27 ^{H6}	45	22	55,42
SLHP-0250-20-2-U	Basic & Advanced & Master		2	20	55,55	60,6	20	15 ^{H6}	27 ^{H6}	45	35	55,42
SLHP-0250-20-3-U	Basic & Advanced & Master		3	20	55,55	60,6	20	25 ^{h6}	-	45	85	55,42
SLHP-0250-20-1-P	Classic		1	20	55,55	60,6	29	15 ^{H6}	27 ^{H6}	45	22	
SLHP-0250-20-2-P	Classic		2	20	55,55	60,6	29	15 ^{H6}	27 ^{H6}	45	35	
SLHP-0250-20-3-P	Classic		3	20	55,55	60,6	29	25 ^{h6}	-	45	85	
SLHP-0250-21-1-U	Basic & Advanced & Master		1	21	58,20	63,2	20	15 ^{H6}	30 ^{H6}	46	22	56,75
SLHP-0250-21-2-U	Basic & Advanced & Master		2	21	58,20	63,2	20	15 ^{H6}	30 ^{H6}	46	35	56,75
SLHP-0250-21-3-U	Basic & Advanced & Master		3	21	58,20	63,2	20	25 ^{h6}	-	46	85	56,75
SLHP-0250-21-1-P	Classic		1	21	58,20	63,2	29	15 ^{H6}	30 ^{H6}	46	22	
SLHP-0250-21-2-P	Classic		2	21	58,20	63,2	29	15 ^{H6}	30 ^{H6}	46	35	
SLHP-0250-21-3-P	Classic		3	21	58,20	63,2	29	25 ^{h6}	-	46	85	
SLHP-0250-22-1-U	Basic & Advanced & Master		1	22	60,86	65,9	20	15 ^{H6}	32 ^{H6}	49	22	58,07
SLHP-0250-22-2-U	Basic & Advanced & Master		2	22	60,86	65,9	20	15 ^{H6}	32 ^{H6}	49	35	58,07
SLHP-0250-22-3-U	Basic & Advanced & Master		3	22	60,86	65,9	20	25 ^{h6}	-	49	85	58,07
SLHP-0250-22-1-P	Classic		1	22	60,86	65,9	29	15 ^{H6}	32 ^{H6}	49	22	
SLHP-0250-22-2-P	Classic		2	22	60,86	65,9	29	15 ^{H6}	32 ^{H6}	49	35	
SLHP-0250-22-3-P	Classic		3	22	60,86	65,9	29	25 ^{h6}	-	49	85	
SLHP-0250-24-1-U	Basic & Advanced & Master		1	24	66,16	71,2	20	15 ^{H6}	37 ^{H6}	54	22	60,73
SLHP-0250-24-2-U	Basic & Advanced & Master		2	24	66,16	71,2	20	15 ^{H6}	37 ^{H6}	54	40	60,73
SLHP-0250-24-3-U	Basic & Advanced & Master		3	24	66,16	71,2	20	30 ^{h6}	-	54	90	60,73
SLHP-0250-24-1-P	Classic		1	24	66,16	71,2	29	15 ^{H6}	37 ^{H6}	54	22	
SLHP-0250-24-2-P	Classic		2	24	66,16	71,2	29	15 ^{H6}	37 ^{H6}	54	40	
SLHP-0250-24-3-P	Classic		3	24	66,16	71,2	29	30 ^{h6}	-	54	90	
SLHP-0250-25-1-U	Basic & Advanced & Master		1	25	68,81	73,8	20	15 ^{H6}	40 ^{H6}	57	22	62,05
SLHP-0250-25-2-U	Basic & Advanced & Master		2	25	68,81	73,8	20	15 ^{H6}	40 ^{H6}	57	40	62,05
SLHP-0250-25-3-U	Basic & Advanced & Master		3	25	68,81	73,8	20	30 ^{h6}	-	57	90	62,05
SLHP-0250-25-1-P	Classic		1	25	68,81	73,8	29	15 ^{H6}	40 ^{H6}	57	22	
SLHP-0250-25-2-P	Classic		2	25	68,81	73,8	29	15 ^{H6}	40 ^{H6}	57	40	
SLHP-0250-25-3-P	Classic		3	25	68,81	73,8	29	30 ^{h6}	-	57	90	
SLHP-0250-26-1-U	Basic & Advanced & Master		1	26	71,46	76,5	20	15 ^{H6}	40 ^{H6}	59	22	63,38
SLHP-0250-26-2-U	Basic & Advanced & Master		2	26	71,46	76,5	20	15 ^{H6}	40 ^{H6}	59	40	63,38
SLHP-0250-26-3-U	Basic & Advanced & Master		3	26	71,46	76,5	20	30 ^{h6}	-	59	90	63,38
SLHP-0250-26-1-P	Classic		1	26	71,46	76,5	29	15 ^{H6}	40 ^{H6}	59	22	
SLHP-0250-26-2-P	Classic		2	26	71,46	76,5	29	15 ^{H6}	40 ^{H6}	59	40	
SLHP-0250-26-3-P	Classic		3	26	71,46	76,5	29	30 ^{h6}	-	59	90	
SLHP-0250-28-1-U	Basic & Advanced & Master		1	28	76,77	81,8	20	15 ^{H6}	45 ^{H6}	63	22	66,03
SLHP-0250-28-2-U	Basic & Advanced & Master		2	28	76,77	81,8	20	15 ^{H6}	45 ^{H6}	63	40	66,03
SLHP-0250-28-3-U	Basic & Advanced & Master		3	28	76,77	81,8	20	35 ^{h6}	-	63	95	66,03
SLHP-0250-28-1-P	Classic		1	28	76,77	81,8	29	15 ^{H6}	45 ^{H6}	63	22	
SLHP-0250-28-2-P	Classic		2	28	76,77	81,8	29	15 ^{H6}	45 ^{H6}	63	40	
SLHP-0250-28-3-P	Classic		3	28	76,77	81,8	29	35 ^{h6}	-	63	95	
SLHP-0250-30-1-U	Basic & Advanced & Master		1	30	82,08	87,1	20	15 ^{H6}	45 ^{H6}	69	22	68,68
SLHP-0250-30-2-U	Basic & Advanced & Master		2	30	82,08	87,1	20	15 ^{H6}	45 ^{H6}	69	40	68,68
SLHP-0250-30-3-U	Basic & Advanced & Master		3	30	82,08	87,1	20	35 ^{h6}	-	69	95	68,68
SLHP-0250-30-1-P	Classic		1	30	82,08	87,1	29	15 ^{H6}	45 ^{H6}	69	22	
SLHP-0250-30-2-P	Classic		2	30	82,08	87,1	29	15 ^{H6}	45 ^{H6}	69	40	
SLHP-0250-30-3-P	Classic		3	30	82,08	87,1	29	35 ^{h6}	-	69	95	

All dimensions in mm. 1 Number of teeth. 2 Tolerances: 37^{H6} / 0,002

Pinion with helical teeth, module 3

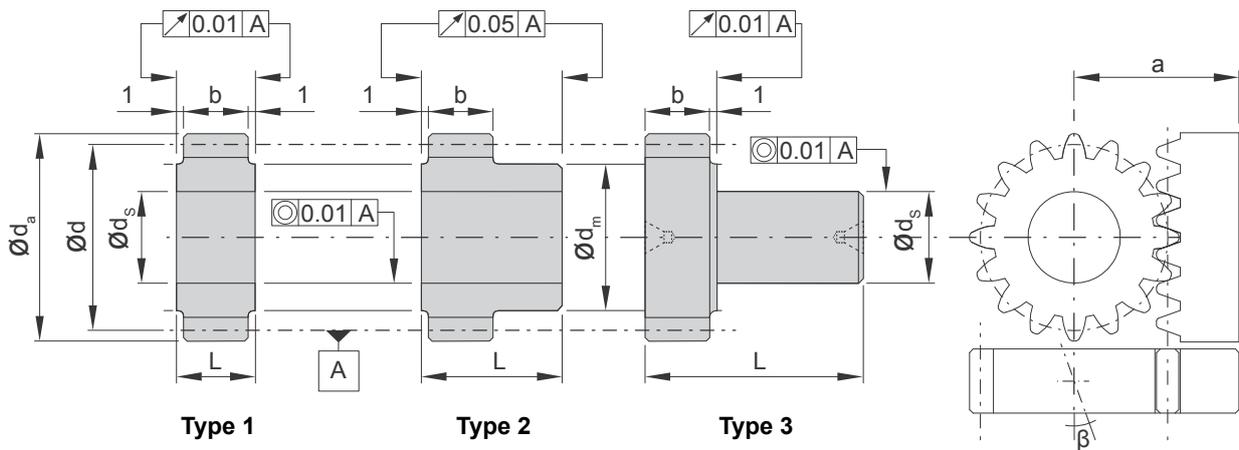
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Servotak Engineering Calculator

Basic Classic Professional Advanced Master

Engineering Calculator

http://servotak.eu/tools/engineering_calculator

Engineering Calculator

Calculation Type: Ball screw Conveyor Elevator Generic Load Rack&Pinion System Rotary Table Forces on Pinion Simple Body Inertia

Calculation: Straight Teeth Helical Teeth

Input		Results	
System Inclination	$\gamma = 90$ degrees	Acceleration	2 m/s ²
Travelling Weight	500 kg	Friction Force	0 N
Speed	0.4 m/s	Acceleration Force	1111.111 N
Acceleration Time	0.2 s	Force due to Gravity	5448.139 N
Friction Coefficient	0.05	Tangential Force on Pinion	$F_t = 6559.25$ N
Service Factor	$K_A = 1.5$	Radial Force on Pinion	$N = 2533.084$ N
System Efficiency	0.9	Axial Force on Pinion	2326.403 N
Pinion Pitch Diameter	$d = 66.315$ mm	Inertia as Seen by the Motor	$J_{T1} = 0.001$ kg·m ²
Pinion Pressure Angle	$\alpha = 20$ degrees	Max Gearbox Output Speed	$n_2 = 115.199$ rpm
Pinion Helix Angle	$\beta_d = 19$ degrees	Ideal Gearbox Ratio	$i = 26.042$
Pinion Helix Angle	$\beta_m = 31$ arcmin	Acceleration Torque on Pinion	$T_2 = 217.488$ N·m
Pinion Helix Angle	$\beta_s = 42$ arcsec	Acceleration Torque on Pinion, Adjusted for Service Factor	$T_{2Max} = 326.232$ N·m
Machining Force	$F = 0$ N		
Motor Rated Speed	$n_1 = 3000$ rpm		

Buttons:

Diagrams

Helical Teeth

Visit http://servotak.eu/tools/engineering_calculator to quickly and easily calculate your machine's requirements

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-0300-18-1-U	Basic & Advanced & Master	1	18	60,30	66,3	30	25 ^{H6}	27 ^{H6}	47	32	67,37
SLHP-0300-18-2-U	Basic & Advanced & Master	2	18	60,30	66,3	30	25 ^{H6}	27 ^{H6}	47	45	67,37
SLHP-0300-18-3-U	Basic & Advanced & Master	3	18	60,30	66,3	30	30 ^{h6}	-	47	100	67,37
SLHP-0300-18-1-P	Classic & Professional	1	18	60,30	66,3	29	25 ^{H6}	27 ^{H6}	47	32	67,37
SLHP-0300-18-2-P	Classic & Professional	2	18	60,30	66,3	29	25 ^{H6}	27 ^{H6}	47	45	67,37
SLHP-0300-18-3-P	Classic & Professional	3	18	60,30	66,3	29	30 ^{h6}	-	47	100	67,37
SLHP-0300-20-1-U	Basic & Advanced & Master	1	20	66,66	72,7	30	25 ^{H6}	32 ^{H6}	54	32	70,55
SLHP-0300-20-2-U	Basic & Advanced & Master	2	20	66,66	72,7	30	25 ^{H6}	32 ^{H6}	54	45	70,55
SLHP-0300-20-3-U	Basic & Advanced & Master	3	20	66,66	72,7	30	30 ^{h6}	-	54	100	70,55
SLHP-0300-20-1-P	Classic & Professional	1	20	66,66	72,7	29	25 ^{H6}	32 ^{H6}	54	32	70,55
SLHP-0300-20-2-P	Classic & Professional	2	20	66,66	72,7	29	25 ^{H6}	32 ^{H6}	54	45	70,55
SLHP-0300-20-3-P	Classic & Professional	3	20	66,66	72,7	29	30 ^{h6}	-	54	100	70,55
SLHP-0300-21-1-U	Basic & Advanced & Master	1	21	69,84	75,8	30	25 ^{H6}	36 ^{H6}	56	32	72,14
SLHP-0300-21-2-U	Basic & Advanced & Master	2	21	69,84	75,8	30	25 ^{H6}	36 ^{H6}	56	45	72,14
SLHP-0300-21-3-U	Basic & Advanced & Master	3	21	69,84	75,8	30	30 ^{h6}	-	56	100	72,14
SLHP-0300-21-1-P	Classic & Professional	1	21	69,84	75,8	29	25 ^{H6}	36 ^{H6}	56	32	72,14
SLHP-0300-21-2-P	Classic & Professional	2	21	69,84	75,8	29	25 ^{H6}	36 ^{H6}	56	45	72,14
SLHP-0300-21-3-P	Classic & Professional	3	21	69,84	75,8	29	30 ^{h6}	-	56	100	72,14
SLHP-0300-22-1-U	Basic & Advanced & Master	1	22	73,03	79,0	30	25 ^{H6}	38 ^{H6}	60	32	73,73
SLHP-0300-22-2-U	Basic & Advanced & Master	2	22	73,03	79,0	30	25 ^{H6}	38 ^{H6}	60	50	73,73
SLHP-0300-22-3-U	Basic & Advanced & Master	3	22	73,03	79,0	30	35 ^{h6}	-	60	110	73,73
SLHP-0300-22-1-P	Classic & Professional	1	22	73,03	79,0	29	25 ^{H6}	38 ^{H6}	60	32	73,73
SLHP-0300-22-2-P	Classic & Professional	2	22	73,03	79,0	29	25 ^{H6}	38 ^{H6}	60	50	73,73
SLHP-0300-22-3-P	Classic & Professional	3	22	73,03	79,0	29	35 ^{h6}	-	60	110	73,73
SLHP-0300-24-1-U	Basic & Advanced & Master	1	24	79,40	85,4	30	25 ^{H6}	45 ^{H6}	65	32	76,92
SLHP-0300-24-2-U	Basic & Advanced & Master	2	24	79,40	85,4	30	25 ^{H6}	45 ^{H6}	65	50	76,92
SLHP-0300-24-3-U	Basic & Advanced & Master	3	24	79,40	85,4	30	40 ^{h6}	-	65	110	76,92
SLHP-0300-24-1-P	Classic & Professional	1	24	79,40	85,4	29	25 ^{H6}	45 ^{H6}	65	32	76,92
SLHP-0300-24-2-P	Classic & Professional	2	24	79,40	85,4	29	25 ^{H6}	45 ^{H6}	65	50	76,92
SLHP-0300-24-3-P	Classic & Professional	3	24	79,40	85,4	29	40 ^{h6}	-	65	110	76,92
SLHP-0300-25-1-U	Basic & Advanced & Master	1	25	82,58	88,6	30	25 ^{H6}	48 ^{H6}	68	32	78,51
SLHP-0300-25-2-U	Basic & Advanced & Master	2	25	82,58	88,6	30	25 ^{H6}	48 ^{H6}	68	50	78,51
SLHP-0300-25-3-U	Basic & Advanced & Master	3	25	82,58	88,6	30	40 ^{h6}	-	68	110	78,51
SLHP-0300-25-1-P	Classic & Professional	1	25	82,58	88,6	29	25 ^{H6}	48 ^{H6}	68	32	78,51
SLHP-0300-25-2-P	Classic & Professional	2	25	82,58	88,6	29	25 ^{H6}	48 ^{H6}	68	50	78,51
SLHP-0300-25-3-P	Classic & Professional	3	25	82,58	88,6	29	40 ^{h6}	-	68	110	78,51
SLHP-0300-26-1-U	Basic & Advanced & Master	1	26	85,76	91,8	30	25 ^{H6}	50 ^{H6}	72	32	80,10
SLHP-0300-26-2-U	Basic & Advanced & Master	2	26	85,76	91,8	30	25 ^{H6}	50 ^{H6}	72	50	80,10
SLHP-0300-26-3-U	Basic & Advanced & Master	3	26	85,76	91,8	30	45 ^{h6}	-	72	120	80,10
SLHP-0300-26-1-P	Classic & Professional	1	26	85,76	91,8	29	25 ^{H6}	50 ^{H6}	72	32	80,10
SLHP-0300-26-2-P	Classic & Professional	2	26	85,76	91,8	29	25 ^{H6}	50 ^{H6}	72	50	80,10
SLHP-0300-26-3-P	Classic & Professional	3	26	85,76	91,8	29	45 ^{h6}	-	72	120	80,10
SLHP-0300-28-1-U	Basic & Advanced & Master	1	28	92,13	98,1	30	25 ^{H6}	52 ^{H6}	78	32	83,28
SLHP-0300-28-2-U	Basic & Advanced & Master	2	28	92,13	98,1	30	25 ^{H6}	52 ^{H6}	78	50	83,28
SLHP-0300-28-3-U	Basic & Advanced & Master	3	28	92,13	98,1	30	45 ^{h6}	-	78	120	83,28
SLHP-0300-28-1-P	Classic & Professional	1	28	92,13	98,1	29	25 ^{H6}	52 ^{H6}	78	32	83,28
SLHP-0300-28-2-P	Classic & Professional	2	28	92,13	98,1	29	25 ^{H6}	52 ^{H6}	78	50	83,28
SLHP-0300-28-3-P	Classic & Professional	3	28	92,13	98,1	29	45 ^{h6}	-	78	120	83,28
SLHP-0300-30-1-U	Basic & Advanced & Master	1	30	98,50	104,5	30	25 ^{H6}	55 ^{H6}	84	32	86,47
SLHP-0300-30-2-U	Basic & Advanced & Master	2	30	98,50	104,5	30	25 ^{H6}	55 ^{H6}	84	50	86,47
SLHP-0300-30-3-U	Basic & Advanced & Master	3	30	98,50	104,5	30	50 ^{h6}	-	84	130	86,47
SLHP-0300-30-1-P	Classic & Professional	1	30	98,50	104,5	29	25 ^{H6}	55 ^{H6}	84	32	86,47
SLHP-0300-30-2-P	Classic & Professional	2	30	98,50	104,5	29	25 ^{H6}	55 ^{H6}	84	50	86,47
SLHP-0300-30-3-P	Classic & Professional	3	30	98,50	104,5	29	50 ^{h6}	-	84	130	86,47

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 4

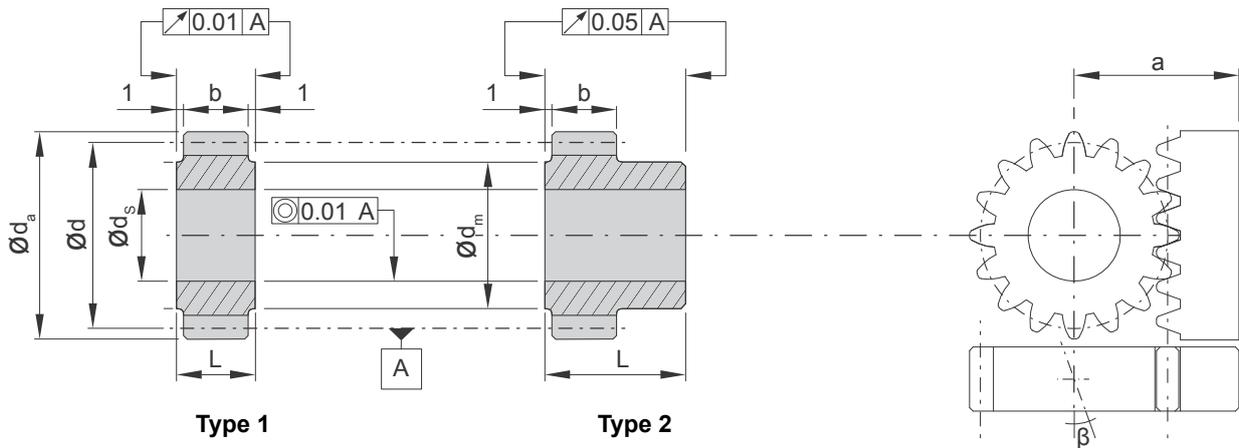
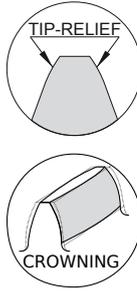
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Other Servotak Products
SG Series Gearboxes
Offering the best performance for rack and pinion systems

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-0400-18-1-B	Basic	1	18	80,79	89,1	36	25 ^{H6}	30 ^{H6}	60	38	86,07
SLHP-0400-18-2-B	Basic	2	18	80,79	89,1	36	25 ^{H6}	30 ^{H6}	60	60	86,07
SLHP-0400-18-1-P	Classic & Professional	1	18	80,79	89,1	39	25 ^{H6}	30 ^{H6}	60	38	86,07
SLHP-0400-18-2-P	Classic & Professional	2	18	80,79	89,1	39	25 ^{H6}	30 ^{H6}	60	60	86,07
SLHP-0400-18-1-M	Advanced & Master	1	18	80,79	89,4	36	25 ^{H6}	30 ^{H6}	60	38	86,07
SLHP-0400-18-2-M	Advanced & Master	2	18	80,79	89,4	36	25 ^{H6}	30 ^{H6}	60	60	86,07
SLHP-0400-20-1-B	Basic	1	20	89,28	97,6	36	25 ^{H6}	40 ^{H6}	70	38	90,31
SLHP-0400-20-2-B	Basic	2	20	89,28	97,6	36	25 ^{H6}	40 ^{H6}	70	60	90,31
SLHP-0400-20-1-P	Classic & Professional	1	20	89,28	97,6	39	25 ^{H6}	40 ^{H6}	70	38	90,31
SLHP-0400-20-2-P	Classic & Professional	2	20	89,28	97,6	39	25 ^{H6}	40 ^{H6}	70	60	90,31
SLHP-0400-20-1-M	Advanced & Master	1	20	89,28	98,1	36	25 ^{H6}	40 ^{H6}	70	38	90,31
SLHP-0400-20-2-M	Advanced & Master	2	20	89,28	98,1	36	25 ^{H6}	40 ^{H6}	70	60	90,31
SLHP-0400-21-1-B	Basic	1	21	93,53	101,8	36	25 ^{H6}	45 ^{H6}	75	38	92,43
SLHP-0400-21-2-B	Basic	2	21	93,53	101,8	36	25 ^{H6}	45 ^{H6}	75	60	92,43
SLHP-0400-21-1-P	Classic & Professional	1	21	93,53	101,8	39	25 ^{H6}	45 ^{H6}	75	38	92,43
SLHP-0400-21-2-P	Classic & Professional	2	21	93,53	101,8	39	25 ^{H6}	45 ^{H6}	75	60	92,43
SLHP-0400-21-1-M	Advanced & Master	1	21	93,53	102,4	36	25 ^{H6}	45 ^{H6}	75	38	92,43
SLHP-0400-21-2-M	Advanced & Master	2	21	93,53	102,4	36	25 ^{H6}	45 ^{H6}	75	60	92,43
SLHP-0400-22-1-B	Basic	1	22	97,77	106,1	36	25 ^{H6}	45 ^{H6}	80	38	94,56
SLHP-0400-22-2-B	Basic	2	22	97,77	106,1	36	25 ^{H6}	45 ^{H6}	80	60	94,56
SLHP-0400-22-1-P	Classic & Professional	1	22	97,77	106,1	39	25 ^{H6}	45 ^{H6}	80	38	94,56
SLHP-0400-22-2-P	Classic & Professional	2	22	97,77	106,1	39	25 ^{H6}	45 ^{H6}	80	60	94,56
SLHP-0400-22-1-M	Advanced & Master	1	22	97,77	106,8	36	25 ^{H6}	45 ^{H6}	80	38	94,56
SLHP-0400-22-2-M	Advanced & Master	2	22	97,77	106,8	36	25 ^{H6}	45 ^{H6}	80	60	94,56
SLHP-0400-24-1-B	Basic	1	24	106,26	114,6	36	25 ^{H6}	55 ^{H6}	85	38	98,80
SLHP-0400-24-2-B	Basic	2	24	106,26	114,6	36	25 ^{H6}	55 ^{H6}	85	70	98,80
SLHP-0400-24-1-P	Classic & Professional	1	24	106,26	114,6	39	25 ^{H6}	55 ^{H6}	85	38	98,80
SLHP-0400-24-2-P	Classic & Professional	2	24	106,26	114,6	39	25 ^{H6}	55 ^{H6}	85	70	98,80
SLHP-0400-24-1-M	Advanced & Master	1	24	106,26	115,3	36	25 ^{H6}	55 ^{H6}	85	38	98,80
SLHP-0400-24-2-M	Advanced & Master	2	24	106,26	115,3	36	25 ^{H6}	55 ^{H6}	85	70	98,80
SLHP-0400-26-1-B	Basic	1	26	114,75	123,0	36	25 ^{H6}	60 ^{H6}	95	38	103,04
SLHP-0400-26-2-B	Basic	2	26	114,75	123,0	36	25 ^{H6}	60 ^{H6}	95	70	103,04
SLHP-0400-26-1-P	Classic & Professional	1	26	114,75	123,0	39	25 ^{H6}	60 ^{H6}	95	38	103,04
SLHP-0400-26-2-P	Classic & Professional	2	26	114,75	123,0	39	25 ^{H6}	60 ^{H6}	95	70	103,04
SLHP-0400-26-1-M	Advanced & Master	1	26	114,75	123,7	36	25 ^{H6}	60 ^{H6}	95	38	103,04
SLHP-0400-26-2-M	Advanced & Master	2	26	114,75	123,7	36	25 ^{H6}	60 ^{H6}	95	70	103,04

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 5

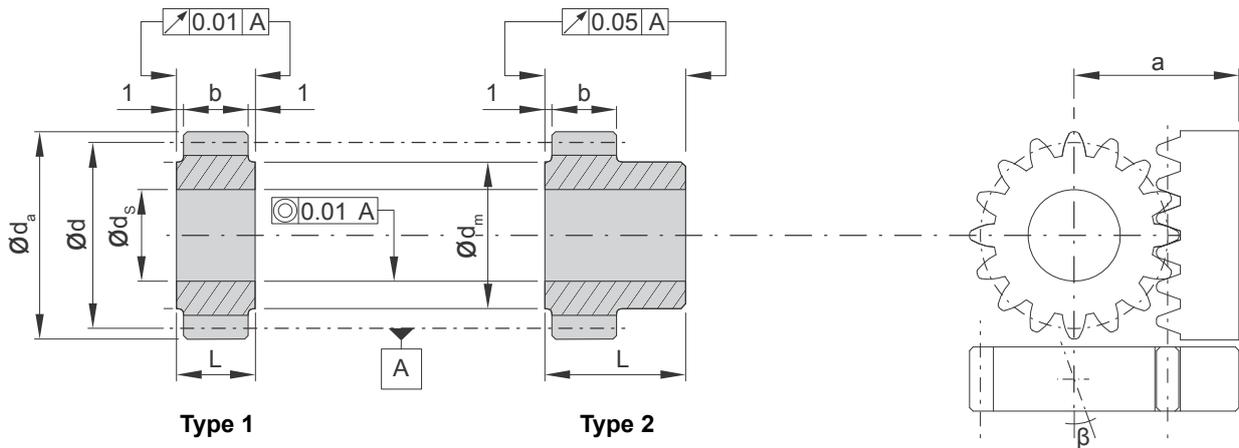
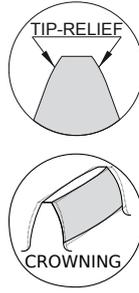
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Basic Classic Professional Advanced Master

Other Servotak Products

SG Series Gearboxes

Electronic preload configuration for true "Zero-Backlash" machine tool applications



Master Advanced Professional Classic Basic

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _S	d _{S max}	d _m	L	a ²
SLHP-0500-18-1-B	Basic	1	18	101,00	111,3	50	35 ^{H6}	40 ^{H6}	80	52	110,07
SLHP-0500-18-2-B	Basic	2	18	101,00	111,3	50	35 ^{H6}	40 ^{H6}	80	80	110,07
SLHP-0500-18-1-P	Classic & Professional	1	18	101,00	111,3	49	35 ^{H6}	40 ^{H6}	80	52	110,07
SLHP-0500-18-2-P	Classic & Professional	2	18	101,00	111,3	49	35 ^{H6}	40 ^{H6}	80	80	110,07
SLHP-0500-18-1-M	Advanced & Master	1	18	101,00	111,8	50	35 ^{H6}	40 ^{H6}	80	52	110,07
SLHP-0500-18-2-M	Advanced & Master	2	18	101,00	111,8	50	35 ^{H6}	40 ^{H6}	80	80	110,07
SLHP-0500-20-1-B	Basic	1	20	111,60	121,9	50	35 ^{H6}	50 ^{H6}	90	52	115,37
SLHP-0500-20-2-B	Basic	2	20	111,60	121,9	50	35 ^{H6}	50 ^{H6}	90	80	115,37
SLHP-0500-20-1-P	Classic & Professional	1	20	111,60	121,9	49	35 ^{H6}	50 ^{H6}	90	52	115,37
SLHP-0500-20-2-P	Classic & Professional	2	20	111,60	121,9	49	35 ^{H6}	50 ^{H6}	90	80	115,37
SLHP-0500-20-1-M	Advanced & Master	1	20	111,60	122,6	50	35 ^{H6}	50 ^{H6}	90	52	115,37
SLHP-0500-20-2-M	Advanced & Master	2	20	111,60	122,6	50	35 ^{H6}	50 ^{H6}	90	80	115,37
SLHP-0500-21-1-B	Basic	1	21	116,91	127,2	50	35 ^{H6}	55 ^{H6}	95	52	118,03
SLHP-0500-21-2-B	Basic	2	21	116,91	127,2	50	35 ^{H6}	55 ^{H6}	95	80	118,03
SLHP-0500-21-1-P	Classic & Professional	1	21	116,91	127,2	49	35 ^{H6}	55 ^{H6}	95	52	118,03
SLHP-0500-21-2-P	Classic & Professional	2	21	116,91	127,2	49	35 ^{H6}	55 ^{H6}	95	80	118,03
SLHP-0500-21-1-M	Advanced & Master	1	21	116,91	128,0	50	35 ^{H6}	55 ^{H6}	95	52	118,03
SLHP-0500-21-2-M	Advanced & Master	2	21	116,91	128,0	50	35 ^{H6}	55 ^{H6}	95	80	118,03
SLHP-0500-22-1-B	Basic	1	22	122,21	132,5	50	35 ^{H6}	60 ^{H6}	100	52	120,68
SLHP-0500-22-2-B	Basic	2	22	122,21	132,5	50	35 ^{H6}	60 ^{H6}	100	80	120,68
SLHP-0500-22-1-P	Classic & Professional	1	22	122,21	132,5	49	35 ^{H6}	60 ^{H6}	100	52	120,68
SLHP-0500-22-2-P	Classic & Professional	2	22	122,21	132,5	49	35 ^{H6}	60 ^{H6}	100	80	120,68
SLHP-0500-22-1-M	Advanced & Master	1	22	122,21	133,4	50	35 ^{H6}	60 ^{H6}	100	52	120,68
SLHP-0500-22-2-M	Advanced & Master	2	22	122,21	133,4	50	35 ^{H6}	60 ^{H6}	100	80	120,68
SLHP-0500-24-1-B	Basic	1	24	131,82	143,1	50	35 ^{H6}	65 ^{H6}	110	52	125,98
SLHP-0500-24-2-B	Basic	2	24	131,82	143,1	50	35 ^{H6}	65 ^{H6}	110	90	125,98
SLHP-0500-24-1-P	Classic & Professional	1	24	131,82	143,1	49	35 ^{H6}	65 ^{H6}	110	52	125,98
SLHP-0500-24-2-P	Classic & Professional	2	24	131,82	143,1	49	35 ^{H6}	65 ^{H6}	110	90	125,98
SLHP-0500-24-1-M	Advanced & Master	1	24	131,82	144,0	50	35 ^{H6}	65 ^{H6}	110	52	125,98
SLHP-0500-24-2-M	Advanced & Master	2	24	131,82	144,0	50	35 ^{H6}	65 ^{H6}	110	90	125,98
SLHP-0500-26-1-B	Basic	1	26	143,43	153,7	50	35 ^{H6}	75 ^{H6}	120	52	131,29
SLHP-0500-26-2-B	Basic	2	26	143,43	153,7	50	35 ^{H6}	75 ^{H6}	120	90	131,29
SLHP-0500-26-1-P	Classic & Professional	1	26	143,43	153,7	49	35 ^{H6}	75 ^{H6}	120	52	131,29
SLHP-0500-26-2-P	Classic & Professional	2	26	143,43	153,7	49	35 ^{H6}	75 ^{H6}	120	90	131,29
SLHP-0500-26-1-M	Advanced & Master	1	26	143,43	154,6	50	35 ^{H6}	75 ^{H6}	120	52	131,29
SLHP-0500-26-2-M	Advanced & Master	2	26	143,43	154,6	50	35 ^{H6}	75 ^{H6}	120	90	131,29

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00



Other Servotak Products
FG Series Gearboxes
ISO 9409-1-A interface plates with reinforced output bearings for the highest load capacity

Pinion with helical teeth, module 6

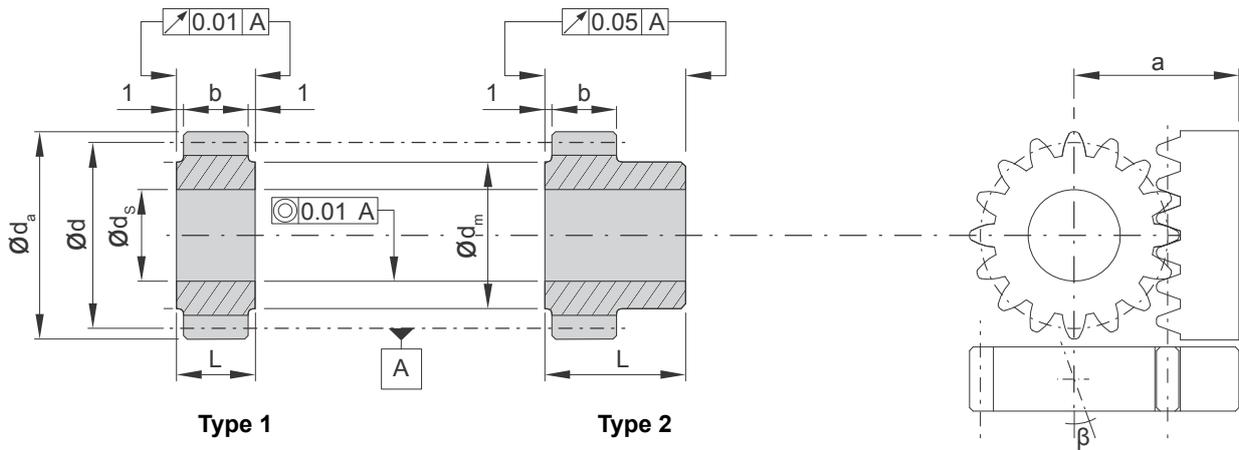
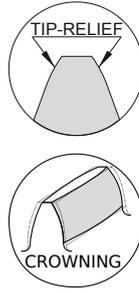
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Other Servotak Products

SG Series Gearboxes

Available with integrated pinions for high precision machine tools

Master Advanced Professional Classic Basic

Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _S	d _{S max}	d _m	L	a ²
SLHP-0600-18-1-B	Basic	1	18	121,19	133,5	55	40 ^{H6}	50 ^{H6}	95	57	129,11
SLHP-0600-18-2-B	Basic	2	18	121,19	133,5	55	40 ^{H6}	50 ^{H6}	95	80	129,11
SLHP-0600-18-1-P	Classic & Professional	1	18	121,19	133,5	59	40 ^{H6}	50 ^{H6}	95	57	129,11
SLHP-0600-18-2-P	Classic & Professional	2	18	121,19	133,5	59	40 ^{H6}	50 ^{H6}	95	80	129,11
SLHP-0600-18-1-M	Advanced & Master	1	18	121,19	134,2	55	40 ^{H6}	50 ^{H6}	95	57	129,11
SLHP-0600-18-2-M	Advanced & Master	2	18	121,19	134,2	55	40 ^{H6}	50 ^{H6}	95	80	129,11
SLHP-0600-20-1-B	Basic	1	20	133,92	146,2	55	40 ^{H6}	60 ^{H6}	105	57	135,48
SLHP-0600-20-2-B	Basic	2	20	133,92	146,2	55	40 ^{H6}	60 ^{H6}	105	80	135,48
SLHP-0600-20-1-P	Classic & Professional	1	20	133,92	146,2	59	40 ^{H6}	60 ^{H6}	105	57	135,48
SLHP-0600-20-2-P	Classic & Professional	2	20	133,92	146,2	59	40 ^{H6}	60 ^{H6}	105	80	135,48
SLHP-0600-20-1-M	Advanced & Master	1	20	133,92	147,2	55	40 ^{H6}	60 ^{H6}	105	57	135,48
SLHP-0600-20-2-M	Advanced & Master	2	20	133,92	147,2	55	40 ^{H6}	60 ^{H6}	105	80	135,48
SLHP-0600-21-1-B	Basic	1	21	140,30	152,6	55	40 ^{H6}	65 ^{H6}	110	57	138,66
SLHP-0600-21-2-B	Basic	2	21	140,30	152,6	55	40 ^{H6}	65 ^{H6}	110	80	138,66
SLHP-0600-21-1-P	Classic & Professional	1	21	140,30	152,6	59	40 ^{H6}	65 ^{H6}	110	57	138,66
SLHP-0600-21-2-P	Classic & Professional	2	21	140,30	152,6	59	40 ^{H6}	65 ^{H6}	110	80	138,66
SLHP-0600-21-1-M	Advanced & Master	1	21	140,30	153,6	55	40 ^{H6}	65 ^{H6}	110	57	138,66
SLHP-0600-21-2-M	Advanced & Master	2	21	140,30	153,6	55	40 ^{H6}	65 ^{H6}	110	80	138,66
SLHP-0600-22-1-B	Basic	1	22	146,66	159,0	55	40 ^{H6}	70 ^{H6}	120	57	141,84
SLHP-0600-22-2-B	Basic	2	22	146,66	159,0	55	40 ^{H6}	70 ^{H6}	120	95	141,84
SLHP-0600-22-1-P	Classic & Professional	1	22	146,66	159,0	59	40 ^{H6}	70 ^{H6}	120	57	141,84
SLHP-0600-22-2-P	Classic & Professional	2	22	146,66	159,0	59	40 ^{H6}	70 ^{H6}	120	95	141,84
SLHP-0600-22-1-M	Advanced & Master	1	22	146,66	160,0	55	40 ^{H6}	70 ^{H6}	120	57	141,84
SLHP-0600-22-2-M	Advanced & Master	2	22	146,66	160,0	55	40 ^{H6}	70 ^{H6}	120	95	141,84
SLHP-0600-24-1-B	Basic	1	24	159,39	171,7	55	40 ^{H6}	80 ^{H6}	130	57	148,21
SLHP-0600-24-2-B	Basic	2	24	159,39	171,7	55	40 ^{H6}	80 ^{H6}	130	95	148,21
SLHP-0600-24-1-P	Classic & Professional	1	24	159,39	171,7	59	40 ^{H6}	80 ^{H6}	130	57	148,21
SLHP-0600-24-2-P	Classic & Professional	2	24	159,39	171,7	59	40 ^{H6}	80 ^{H6}	130	95	148,21
SLHP-0600-24-1-M	Advanced & Master	1	24	159,39	172,7	55	40 ^{H6}	80 ^{H6}	130	57	148,21
SLHP-0600-24-2-M	Advanced & Master	2	24	159,39	172,7	55	40 ^{H6}	80 ^{H6}	130	95	148,21
SLHP-0600-26-1-B	Basic	1	26	172,12	184,4	55	40 ^{H6}	90 ^{H6}	140	57	154,58
SLHP-0600-26-2-B	Basic	2	26	172,12	184,4	55	40 ^{H6}	90 ^{H6}	140	95	154,58
SLHP-0600-26-1-P	Classic & Professional	1	26	172,12	184,4	59	40 ^{H6}	90 ^{H6}	140	57	154,58
SLHP-0600-26-2-P	Classic & Professional	2	26	172,12	184,4	59	40 ^{H6}	90 ^{H6}	140	95	154,58
SLHP-0600-26-1-M	Advanced & Master	1	26	172,12	185,4	55	40 ^{H6}	90 ^{H6}	140	57	154,58
SLHP-0600-26-2-M	Advanced & Master	2	26	172,12	185,4	55	40 ^{H6}	90 ^{H6}	140	95	154,58

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 8

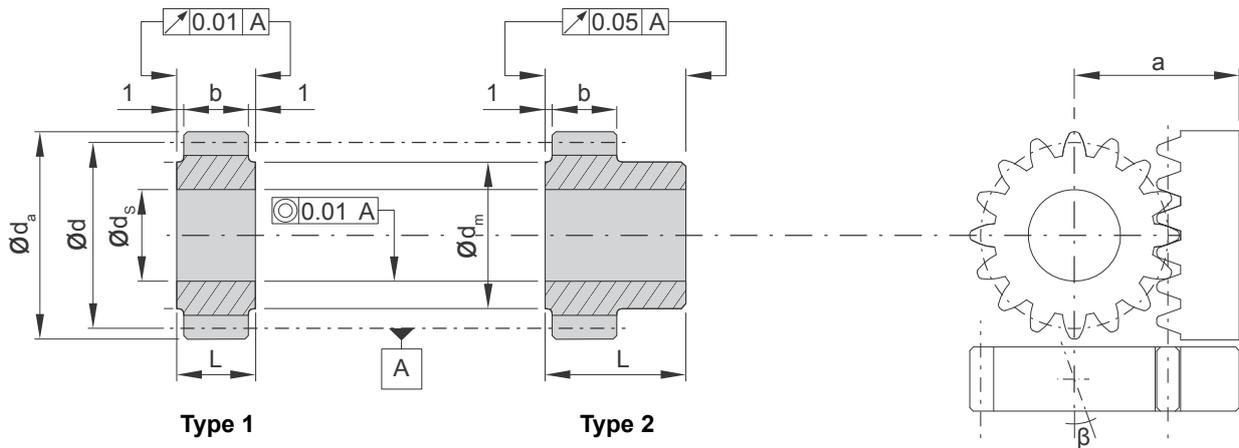
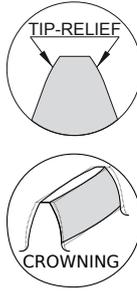
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Basic Classic Professional Advanced Master

Other Servotak Products

SG Series Gearboxes

Long lived high load capacity output bearings for machine tool applications



Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-0800-18-1-B	Basic	1	18	161,59	177,9	80	60 ^{H6}	70 ^{H6}	125	82	167,13
SLHP-0800-18-2-B	Basic	2	18	161,59	177,9	80	60 ^{H6}	70 ^{H6}	125	110	167,13
SLHP-0800-18-1-P	Professional	1	18	161,59	177,9	79	60 ^{H6}	70 ^{H6}	125	82	167,13
SLHP-0800-18-2-P	Professional	2	18	161,59	177,9	79	60 ^{H6}	70 ^{H6}	125	110	167,13
SLHP-0800-18-1-M	Advanced & Master	1	18	161,59	178,8	80	60 ^{H6}	70 ^{H6}	125	82	167,13
SLHP-0800-18-2-M	Advanced & Master	2	18	161,59	178,8	80	60 ^{H6}	70 ^{H6}	125	110	167,13
SLHP-0800-20-1-B	Basic	1	20	178,57	194,9	80	60 ^{H6}	80 ^{H6}	140	82	175,62
SLHP-0800-20-2-B	Basic	2	20	178,57	194,9	80	60 ^{H6}	80 ^{H6}	140	110	175,62
SLHP-0800-20-1-P	Professional	1	20	178,57	194,9	79	60 ^{H6}	80 ^{H6}	140	82	175,62
SLHP-0800-20-2-P	Professional	2	20	178,57	194,9	79	60 ^{H6}	80 ^{H6}	140	110	175,62
SLHP-0800-20-1-M	Advanced & Master	1	20	178,57	196,4	80	60 ^{H6}	80 ^{H6}	140	82	175,62
SLHP-0800-20-2-M	Advanced & Master	2	20	178,57	196,4	80	60 ^{H6}	80 ^{H6}	140	110	175,62
SLHP-0800-21-1-B	Basic	1	21	187,05	203,4	80	60 ^{H6}	90 ^{H6}	150	82	179,87
SLHP-0800-21-2-B	Basic	2	21	187,05	203,4	80	60 ^{H6}	90 ^{H6}	150	110	179,87
SLHP-0800-21-1-P	Professional	1	21	187,05	203,4	79	60 ^{H6}	90 ^{H6}	150	82	179,87
SLHP-0800-21-2-P	Professional	2	21	187,05	203,4	79	60 ^{H6}	90 ^{H6}	150	110	179,87
SLHP-0800-21-1-M	Advanced & Master	1	21	187,05	204,9	80	60 ^{H6}	90 ^{H6}	150	82	179,87
SLHP-0800-21-2-M	Advanced & Master	2	21	187,05	204,9	80	60 ^{H6}	90 ^{H6}	150	110	179,87
SLHP-0800-22-1-B	Basic	1	22	195,54	211,8	80	60 ^{H6}	100 ^{H6}	155	82	184,11
SLHP-0800-22-2-B	Basic	2	22	195,54	211,8	80	60 ^{H6}	100 ^{H6}	155	110	184,11
SLHP-0800-22-1-P	Professional	1	22	195,54	211,8	79	60 ^{H6}	100 ^{H6}	155	82	184,11
SLHP-0800-22-2-P	Professional	2	22	195,54	211,8	79	60 ^{H6}	100 ^{H6}	155	110	184,11
SLHP-0800-22-1-M	Advanced & Master	1	22	195,54	213,3	80	60 ^{H6}	100 ^{H6}	155	82	184,11
SLHP-0800-22-2-M	Advanced & Master	2	22	195,54	213,3	80	60 ^{H6}	100 ^{H6}	155	110	184,11
SLHP-0800-24-1-B	Basic	1	24	212,52	228,8	80	60 ^{H6}	110 ^{H6}	170	82	192,60
SLHP-0800-24-2-B	Basic	2	24	212,52	228,8	80	60 ^{H6}	110 ^{H6}	170	120	192,60
SLHP-0800-24-1-P	Professional	1	24	212,52	228,8	79	60 ^{H6}	110 ^{H6}	170	82	192,60
SLHP-0800-24-2-P	Professional	2	24	212,52	228,8	79	60 ^{H6}	110 ^{H6}	170	120	192,60
SLHP-0800-24-1-M	Advanced & Master	1	24	212,52	230,3	80	60 ^{H6}	110 ^{H6}	170	82	192,60
SLHP-0800-24-2-M	Advanced & Master	2	24	212,52	230,3	80	60 ^{H6}	120 ^{H6}	170	120	192,60
SLHP-0800-26-1-B	Basic	1	26	229,50	245,8	80	60 ^{H6}	120 ^{H6}	180	82	201,09
SLHP-0800-26-2-B	Basic	2	26	229,50	245,8	80	60 ^{H6}	120 ^{H6}	180	120	201,09
SLHP-0800-26-1-P	Professional	1	26	229,50	245,8	79	60 ^{H6}	120 ^{H6}	180	82	201,09
SLHP-0800-26-2-P	Professional	2	26	229,50	245,8	79	60 ^{H6}	120 ^{H6}	180	120	201,09
SLHP-0800-26-1-M	Advanced & Master	1	26	229,50	247,3	80	60 ^{H6}	120 ^{H6}	180	82	201,09
SLHP-0800-26-2-M	Advanced & Master	2	26	229,50	247,3	80	60 ^{H6}	120 ^{H6}	180	120	201,09

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 10

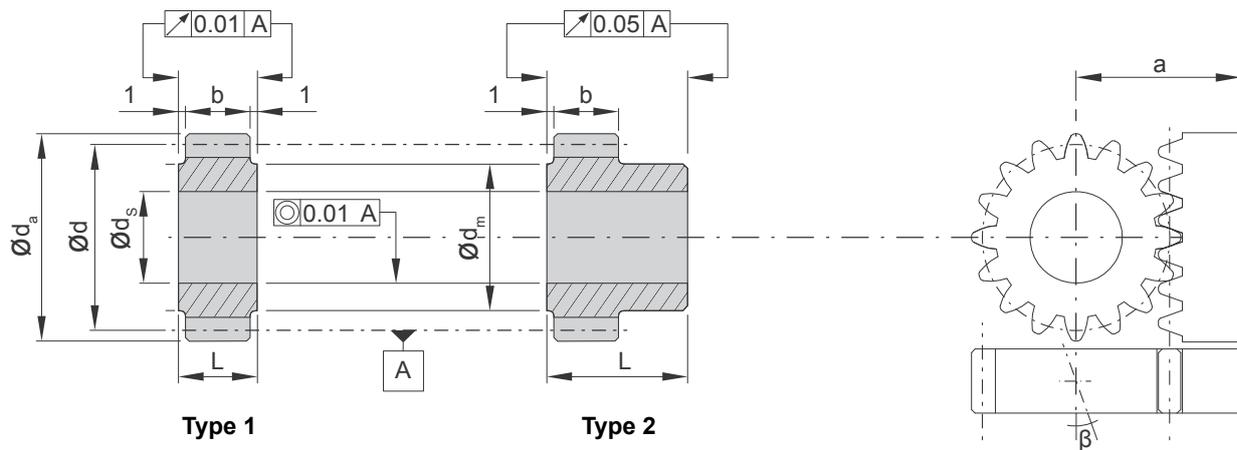
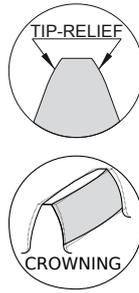
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _S	d _{S max}	d _m	L	a ²
SLHP-1000-18-1-B	Basic	1	18	201,99	222,3	100	60 ^{H6}	70 ^{H6}	125	102	195,18
SLHP-1000-18-2-B	Basic	2	18	201,99	222,3	100	60 ^{H6}	70 ^{H6}	125	110	195,18
SLHP-1000-18-1-P	Professional	1	18	201,99	222,3	99	60 ^{H6}	70 ^{H6}	125	102	195,18
SLHP-1000-18-2-P	Professional	2	18	201,99	222,3	99	60 ^{H6}	70 ^{H6}	125	110	195,18
SLHP-1000-18-1-M	Advanced & Master	1	18	201,99	223,60	100	60 ^{H6}	70 ^{H6}	125	102	195,18
SLHP-1000-18-2-M	Advanced & Master	2	18	201,99	223,60	100	60 ^{H6}	70 ^{H6}	125	110	195,18
SLHP-1000-20-1-B	Basic	1	20	223,21	243,5	100	60 ^{H6}	80 ^{H6}	140	102	205,79
SLHP-1000-20-2-B	Basic	2	20	223,21	243,5	100	60 ^{H6}	80 ^{H6}	140	110	205,79
SLHP-1000-20-1-P	Professional	1	20	223,21	243,5	99	60 ^{H6}	80 ^{H6}	140	102	205,79
SLHP-1000-20-2-P	Professional	2	20	223,21	243,5	99	60 ^{H6}	80 ^{H6}	140	110	205,79
SLHP-1000-20-1-M	Advanced & Master	1	20	223,21	245,40	100	60 ^{H6}	80 ^{H6}	140	102	205,79
SLHP-1000-20-2-M	Advanced & Master	2	20	223,21	245,40	100	60 ^{H6}	80 ^{H6}	140	110	205,79
SLHP-1000-21-1-B	Basic	1	21	233,82	254,1	100	60 ^{H6}	90 ^{H6}	150	102	211,09
SLHP-1000-21-2-B	Basic	2	21	233,82	254,1	100	60 ^{H6}	90 ^{H6}	150	110	211,09
SLHP-1000-21-1-P	Professional	1	21	233,82	254,1	99	60 ^{H6}	90 ^{H6}	150	102	211,09
SLHP-1000-21-2-P	Professional	2	21	233,82	254,1	99	60 ^{H6}	90 ^{H6}	150	110	211,09
SLHP-1000-21-1-M	Advanced & Master	1	21	233,82	256,00	100	60 ^{H6}	90 ^{H6}	150	102	211,09
SLHP-1000-21-2-M	Advanced & Master	2	21	233,82	256,00	100	60 ^{H6}	90 ^{H6}	150	110	211,09
SLHP-1000-22-1-B	Basic	1	22	244,43	264,7	100	60 ^{H6}	100 ^{H6}	155	102	216,40
SLHP-1000-22-2-B	Basic	2	22	244,43	264,7	100	60 ^{H6}	100 ^{H6}	155	110	216,40
SLHP-1000-22-1-P	Professional	1	22	244,43	264,7	99	60 ^{H6}	100 ^{H6}	155	102	216,40
SLHP-1000-22-2-P	Professional	2	22	244,43	264,7	99	60 ^{H6}	100 ^{H6}	155	110	216,40
SLHP-1000-22-1-M	Advanced & Master	1	22	244,43	266,60	100	60 ^{H6}	100 ^{H6}	155	102	216,40
SLHP-1000-22-2-M	Advanced & Master	2	22	244,43	266,60	100	60 ^{H6}	100 ^{H6}	155	110	216,40
SLHP-1000-24-1-B	Basic	1	24	265,65	285,9	100	60 ^{H6}	110 ^{H6}	170	102	227,00
SLHP-1000-24-2-B	Basic	2	24	265,65	285,9	100	60 ^{H6}	110 ^{H6}	170	120	227,00
SLHP-1000-24-1-P	Professional	1	24	265,65	285,9	99	60 ^{H6}	110 ^{H6}	170	102	227,00
SLHP-1000-24-2-P	Professional	2	24	265,65	285,9	99	60 ^{H6}	110 ^{H6}	170	120	227,00
SLHP-1000-24-1-M	Advanced & Master	1	24	265,65	287,80	100	60 ^{H6}	110 ^{H6}	170	102	227,00
SLHP-1000-24-2-M	Advanced & Master	2	24	265,65	287,80	100	60 ^{H6}	110 ^{H6}	170	120	227,00

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, module 12

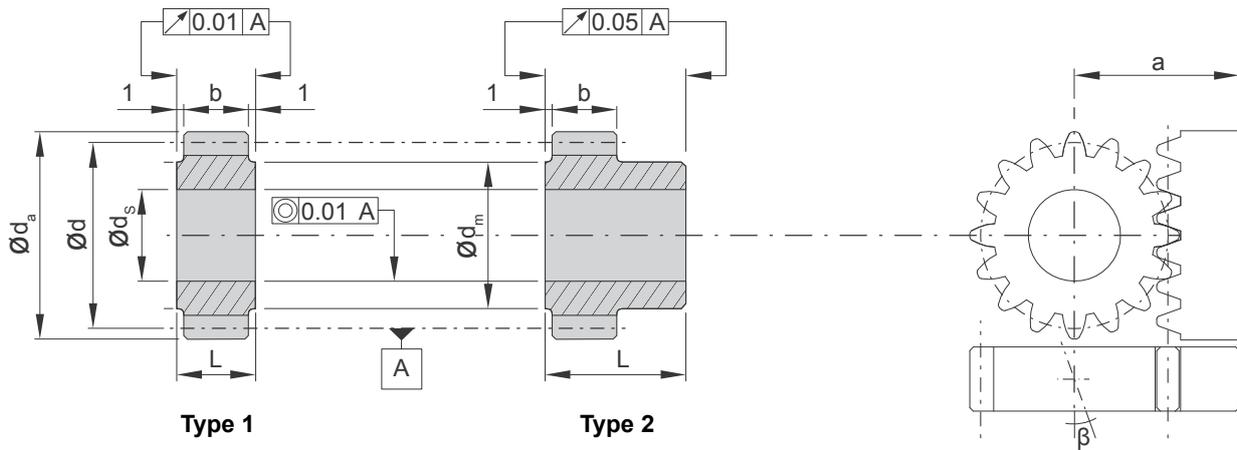
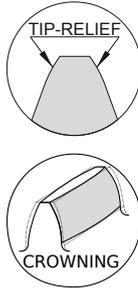
Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67



Ordering Code	For Rack	Type	Z ¹	d	d _a	b	d _s	d _{s max}	d _m	L	a ²
SLHP-1200-18-1-B	Basic	1	18	242,38	266,68	120	60 ^{H6}	130 ^{H6}	190	122	233,27
SLHP-1200-18-2-B	Basic	2	18	242,38	266,68	120	60 ^{H6}	130 ^{H6}	190	160	233,27
SLHP-1200-18-1-M	Advanced & Master	1	18	242,38	268,38	120	60 ^{H6}	130 ^{H6}	190	122	233,27
SLHP-1200-18-2-M	Advanced & Master	2	18	242,38	268,38	120	60 ^{H6}	130 ^{H6}	190	160	233,27
SLHP-1200-20-1-B	Basic	1	20	267,85	292,15	120	60 ^{H6}	140 ^{H6}	210	122	246,00
SLHP-1200-20-2-B	Basic	2	20	267,85	292,15	120	60 ^{H6}	140 ^{H6}	210	160	246,00
SLHP-1200-20-1-M	Advanced & Master	1	20	267,85	294,55	120	60 ^{H6}	140 ^{H6}	210	122	246,00
SLHP-1200-20-2-M	Advanced & Master	2	20	267,85	294,55	120	60 ^{H6}	140 ^{H6}	210	160	246,00
SLHP-1200-21-1-B	Basic	1	21	280,58	304,88	120	60 ^{H6}	150 ^{H6}	220	122	252,37
SLHP-1200-21-2-B	Basic	2	21	280,58	304,88	120	60 ^{H6}	150 ^{H6}	220	160	252,37
SLHP-1200-21-1-M	Advanced & Master	1	21	280,58	307,28	120	60 ^{H6}	150 ^{H6}	220	122	252,37
SLHP-1200-21-2-M	Advanced & Master	2	21	280,58	307,28	120	60 ^{H6}	150 ^{H6}	220	160	252,37
SLHP-1200-22-1-B	Basic	1	22	293,31	317,61	120	60 ^{H6}	160 ^{H6}	230	122	258,74
SLHP-1200-22-2-B	Basic	2	22	293,31	317,61	120	60 ^{H6}	160 ^{H6}	230	170	258,74
SLHP-1200-22-1-M	Advanced & Master	1	22	293,31	320,01	120	60 ^{H6}	160 ^{H6}	230	122	258,74
SLHP-1200-22-2-M	Advanced & Master	2	22	293,31	320,01	120	60 ^{H6}	160 ^{H6}	230	170	258,74

All dimensions in millimetres

¹ Number of Teeth

² Tolerance +0,02 / 0,00

Pinion with helical teeth, according to ISO 9409-1-A

Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter..

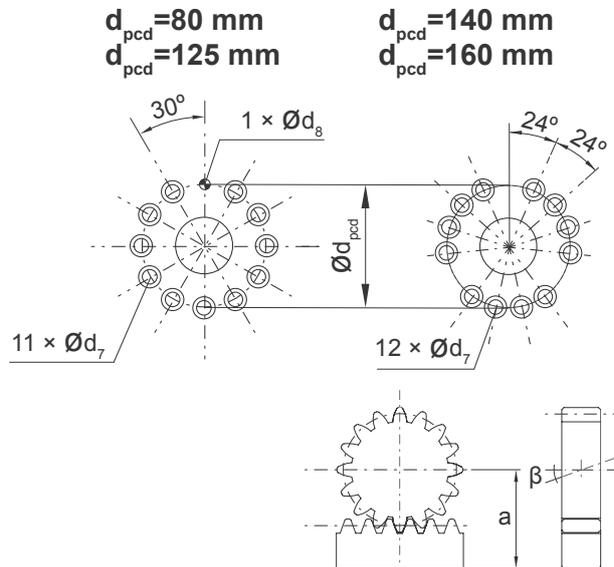
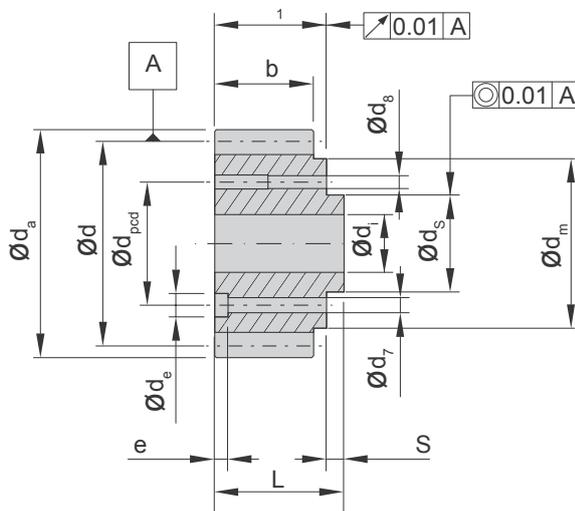
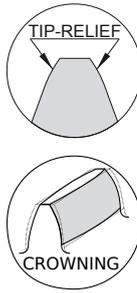
Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67

Notes: Use grade 12.9 screws for assembly
Customized dimensions available upon request



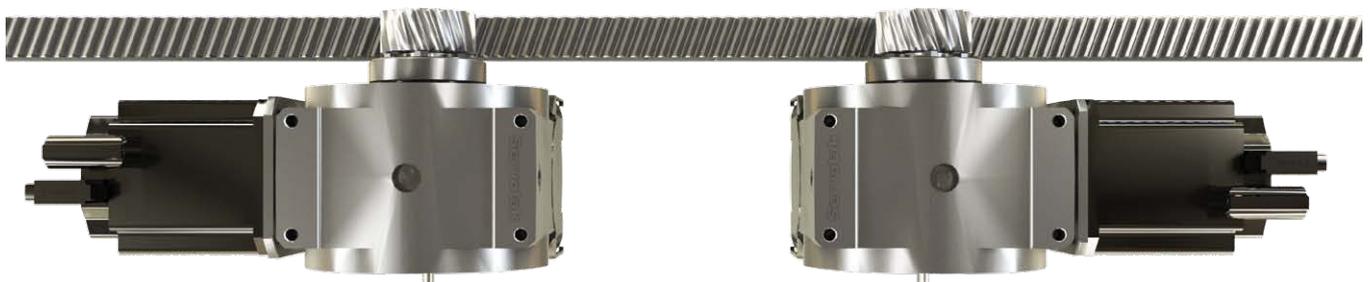
Ordering Code	For Rack	Module	Z ¹	d	d _a	b	d _s ²	S	d _m	L ₁	L	d _{pcd}	d ₇	d _e	e	d ₈ ^{H7}	d _i	a ³
SLHP-0400-28-4E2-M	Advanced & Master	4	28	123,3	132,3	36	50	5	100	40	45	80	9	15	7	8	30	107,31
SLHP-0500-22-4E2-M	Advanced & Master	5	22	122,2	133,4	50	50	5	100	55	60	80	9	15	7	8	30	120,68
SLHP-0600-28-4G2-M	Advanced & Master	6	28	185,4	198,7	55	80	7	160	60	67	125	11	18	11	10	40	161,22
SLHP-0800-26-4H1-M	Advanced & Master	8	26	229,5	247,3	80	90	10	180	88	98	140	18	26	15	-	50	201,09
SLHP-1000-23-4J1-M	Advanced & Master	10	23	255,0	277,2	100	95	8	200	108	116	160	22	33	26	-	50	221,71
SLHP-1200-20-4J1-M	Advanced & Master	12	20	267,8	294,5	120	95	8	200	128	136	160	22	33	26	-	50	246,00

All dimensions in millimetres

¹ Number of Teeth

² Tolerance -0,01 / -0,03

³ Tolerance -0,02 / 0



Pinion with helical teeth, according to ISO 9409-1-A

Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

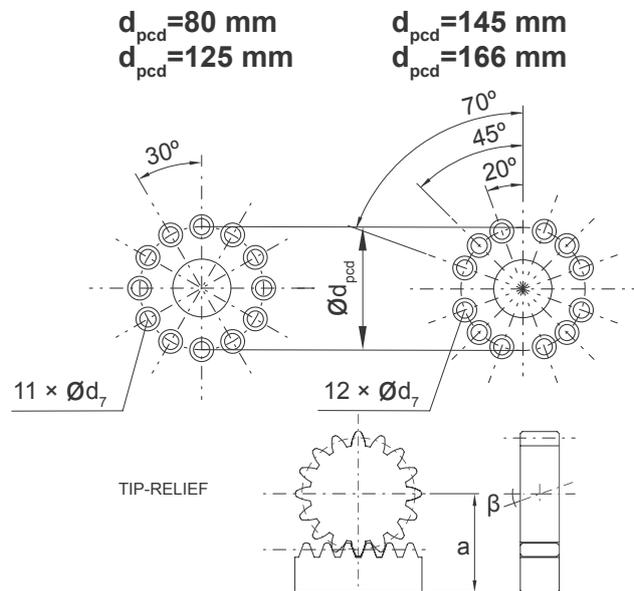
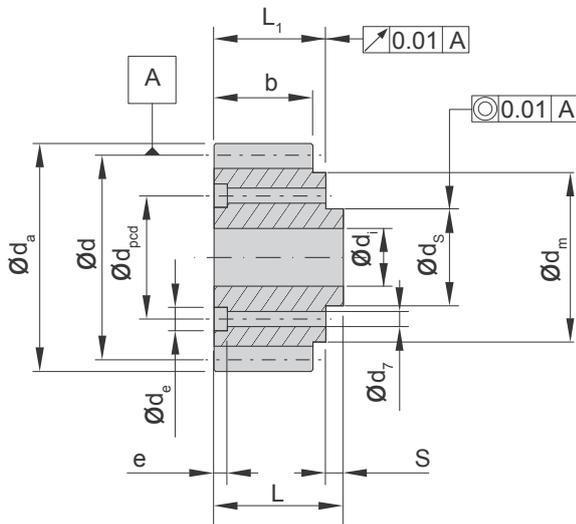
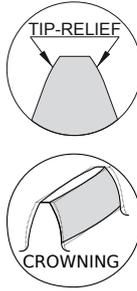
Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67

Notes: Use grade 12.9 screws for assembly
Customized dimensions available upon request



Ordering Code	For Rack	Module	Z ¹	d	d _a	b	d _S ²	S	d _m	L ₁	L	d _{pcd}	d ₇	d _e	e	d _i	a ³
SLHP-0400-28-4E1-M	Advanced & Master	4	28	123,3	132,3	36	50	5	100	40	45	80	18	9	11	30	107,31
SLHP-0500-22-4E1-M	Advanced & Master	5	22	122,2	133,4	50	50	5	100	55	60	80	18	9	11	30	120,68
SLHP-0600-28-4G1-M	Advanced & Master	6	28	185,4	198,7	55	80	7	160	60	67	125	20	10	13	40	161,22
SLHP-0800-26-4I1-M	Advanced & Master	8	26	229,5	247,3	80	90	10	180	88	98	145	33	24	22	50	201,09
SLHP-1000-23-4K1-M	Advanced & Master	10	23	255,0	277,2	100	95	8	200	108	116	166	39	31	26	50	221,71
SLHP-1200-20-4K1-M	Advanced & Master	12	20	267,8	294,5	120	95	8	200	128	136	166	39	31	26	50	246,00

All dimensions in millimetres

¹ Number of Teeth

² Tolerance -0,01 / -0,03

³ Tolerance -0,02 / 0

Pinion with helical teeth, with ISO 9409-1-A interface adapter

Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

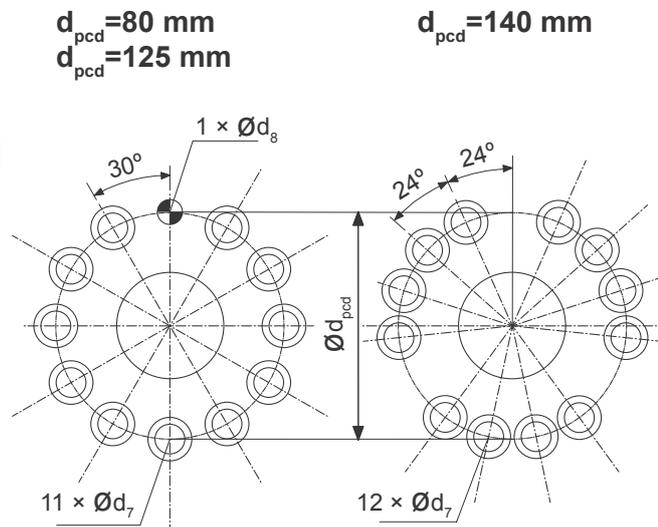
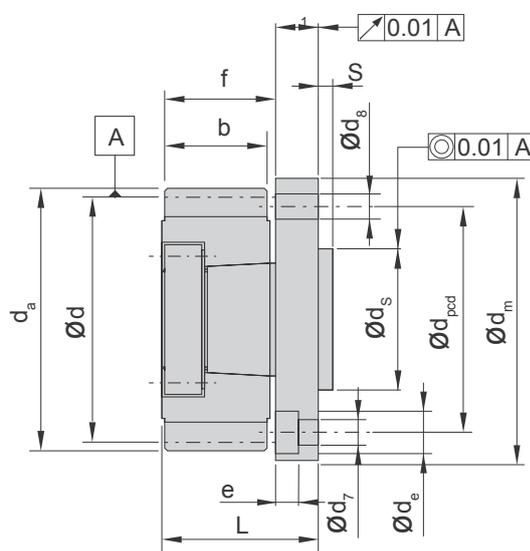
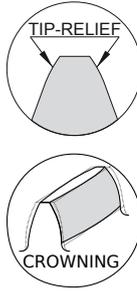
Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67

Notes: Use grade 12.9 screws for assembly
Customized dimensions available upon request



Ordering Code	For Rack	Module	Z ¹	d	d _a	b	d _s	S	d _m	L ₁	f	L	d _{pcd}	d ₇	d _e	e	d ₈ ^{H7}	a ²
SLHP-0400-18-5E2-M	Advanced & Master	4	18	80,79	89,4	36	50	5	100	15	39	55	80	9	15	8	8	86,07
SLHP-0400-20-5E2-M	Advanced & Master	4	20	89,28	98,1	36	50	5	100	15	39	55	80	9	15	8	8	90,31
SLHP-0400-21-5E2-M	Advanced & Master	4	21	93,53	102,4	36	50	5	100	15	39	55	80	9	15	8	8	92,43
SLHP-0400-22-5E2-M	Advanced & Master	4	22	97,77	106,8	36	50	5	100	15	39	55	80	9	15	8	8	94,56
SLHP-0400-24-5E2-M	Advanced & Master	4	24	106,26	115,3	36	50	5	100	15	39	55	80	9	15	8	8	98,80
SLHP-0400-26-5E2-M	Advanced & Master	4	26	114,75	123,7	36	50	5	100	15	39	55	80	9	15	8	8	103,04
SLHP-0500-18-5E2-M	Advanced & Master	5	18	101,00	111,8	50	50	5	100	15	53	69	80	9	15	8	8	110,07
SLHP-0500-20-5E2-M	Advanced & Master	5	20	111,60	122,6	50	50	5	100	15	53	69	80	9	15	8	8	115,37
SLHP-0500-21-5E2-M	Advanced & Master	5	21	116,91	128,0	50	50	5	100	15	53	69	80	9	15	8	8	118,03
SLHP-0600-18-5G2-M	Advanced & Master	6	18	121,19	134,2	55	80	7	160	20	58	79	125	11	18	10	10	129,11
SLHP-0600-20-5G2-M	Advanced & Master	6	20	133,92	147,2	55	80	7	160	20	58	79	125	11	18	10	10	135,48
SLHP-0600-21-5G2-M	Advanced & Master	6	21	140,30	153,6	55	80	7	160	20	58	79	125	11	18	10	10	138,66
SLHP-0600-22-5G2-M	Advanced & Master	6	22	146,66	160,0	55	80	7	160	20	58	79	125	11	18	10	10	141,84
SLHP-0600-24-5G2-M	Advanced & Master	6	24	159,39	172,7	55	80	7	160	20	58	79	125	11	18	10	10	148,21
SLHP-0600-26-5G2-M	Advanced & Master	6	26	172,12	185,4	55	80	7	160	20	58	79	125	11	18	10	10	154,58
SLHP-0800-18-5H1-M	Advanced & Master	8	18	161,59	178,9	80	90	10	180	25	83	109	140	18	26	16	-	167,13
SLHP-0800-20-5H1-M	Advanced & Master	8	20	178,57	196,4	80	90	10	180	25	83	109	140	18	26	16	-	175,62
SLHP-0800-12-5H1-M	Advanced & Master	8	21	187,05	204,9	80	90	10	180	25	83	109	140	18	26	16	-	179,87
SLHP-0800-22-5H1-M	Advanced & Master	8	22	195,54	213,3	80	90	10	180	25	83	109	140	18	26	16	-	184,11
SLHP-0800-24-5H1-M	Advanced & Master	8	24	212,52	230,3	80	90	10	180	25	83	109	140	18	26	16	-	192,60

All dimensions in millimetres

¹ Number of Teeth

² Rack-pinion mounting distance. Tolerance +0,02/+0,00

Pinion with helical teeth, with ISO 9409-1-A interface adapter

Optimized teeth: Improves contact area, reduces mesh misalignments, improves operational safety, runs cooler and quieter.

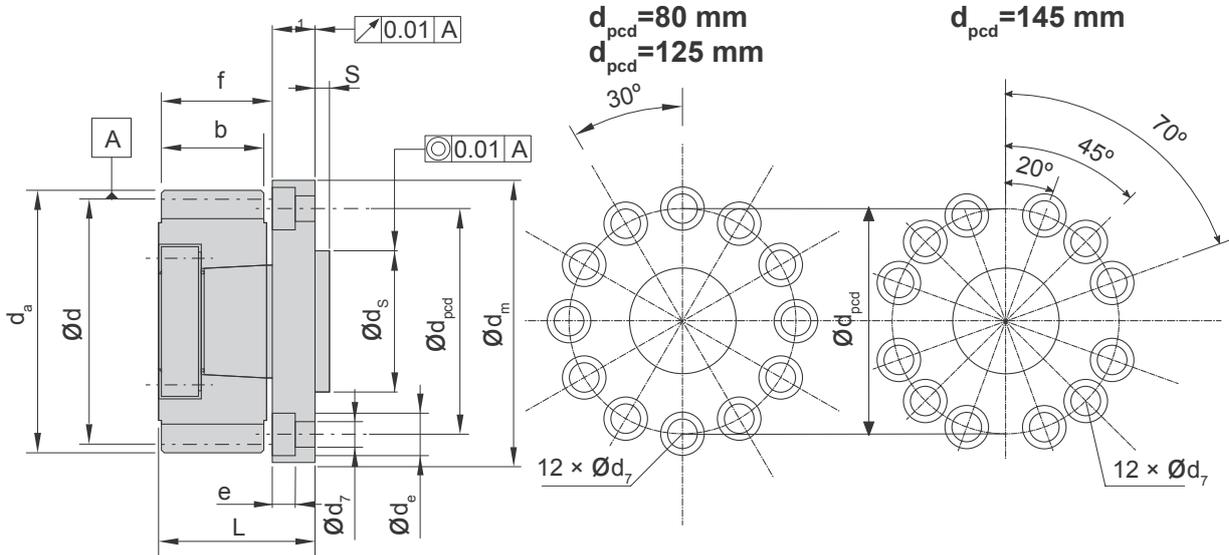
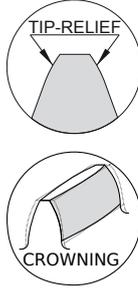
Material: 18CrNiMo5

Tooth: Helical, ground. Case hardened and tempered, HRC 60-62
With tip-relief and crowning
Pressure angle (α): 20°
Helix angle (β): 19°31'42", left-handed

Faces: All faces ground, $R_a \leq 0.8 \mu\text{m}$

Quality: 6 DIN 3962/63/67

Notes: Use grade 12.9 screws for assembly
Customized dimensions available upon request



Ordering Code	For Rack	Module	Z ¹	d	d _a	b	d _s	S	d _m	L ₁	f	L	d _{pcd}	d ₇	d _e	e	a ²
SLHP-0400-18-5E1-M	Advanced & Master	4	18	80,79	89,4	36	50	5	100	18	39	58	80	11	18	10	86,07
SLHP-0400-20-5E1-M	Advanced & Master	4	20	89,28	98,1	36	50	5	100	18	39	58	80	11	18	10	90,31
SLHP-0400-21-5E1-M	Advanced & Master	4	21	93,53	102,4	36	50	5	100	18	39	58	80	11	18	10	92,43
SLHP-0400-22-5E1-M	Advanced & Master	4	22	97,77	106,8	36	50	5	100	18	39	58	80	11	18	10	94,56
SLHP-0400-24-5E1-M	Advanced & Master	4	24	106,26	115,3	36	50	5	100	18	39	58	80	11	18	10	98,80
SLHP-0400-26-5E1-M	Advanced & Master	4	26	114,75	123,7	36	50	5	100	18	39	58	80	11	18	10	103,04
SLHP-0500-18-5E1-M	Advanced & Master	5	18	101,00	111,8	50	50	5	100	18	53	72	80	11	18	10	110,07
SLHP-0500-20-5E1-M	Advanced & Master	5	20	111,60	122,6	50	50	5	100	18	53	72	80	11	18	10	115,37
SLHP-0500-21-5E1-M	Advanced & Master	5	21	116,91	128,0	50	50	5	100	18	53	72	80	11	18	10	118,03
SLHP-0600-18-5G1-M	Advanced & Master	6	18	121,19	134,2	55	80	7	160	24	58	83	125	13	20	12	129,11
SLHP-0600-20-5G1-M	Advanced & Master	6	20	133,92	147,2	55	80	7	160	24	58	83	125	13	20	12	135,48
SLHP-0600-21-5G1-M	Advanced & Master	6	21	140,30	153,6	55	80	7	160	24	58	83	125	13	20	12	138,66
SLHP-0600-22-5G1-M	Advanced & Master	6	22	146,66	160,0	55	80	7	160	24	58	83	125	13	20	12	141,84
SLHP-0600-24-5G1-M	Advanced & Master	6	24	159,39	172,7	55	80	7	160	24	58	83	125	13	20	12	148,21
SLHP-0600-26-5G1-M	Advanced & Master	6	26	172,12	185,4	55	80	7	160	24	58	83	125	13	20	12	154,58
SLHP-0800-18-5I1-M	Advanced & Master	8	18	161,59	178,9	80	90	10	180	34	83	118	145	22	33	20	167,13
SLHP-0800-20-5I1-M	Advanced & Master	8	20	178,57	196,4	80	90	10	180	34	83	118	145	22	33	20	175,62
SLHP-0800-12-5I1-M	Advanced & Master	8	21	187,05	204,9	80	90	10	180	34	83	118	145	22	33	20	179,87
SLHP-0800-22-5I1-M	Advanced & Master	8	22	195,54	213,3	80	90	10	180	34	83	118	145	22	33	20	184,11
SLHP-0800-24-5I1-M	Advanced & Master	8	24	212,52	230,3	80	90	10	180	34	83	118	145	22	33	20	192,60

All dimensions in millimetres

¹ Number of Teeth

² Rack-pinion mounting distance. Tolerance +0,02/+0,00