

 **SCHRIEVER®**

verbindet.

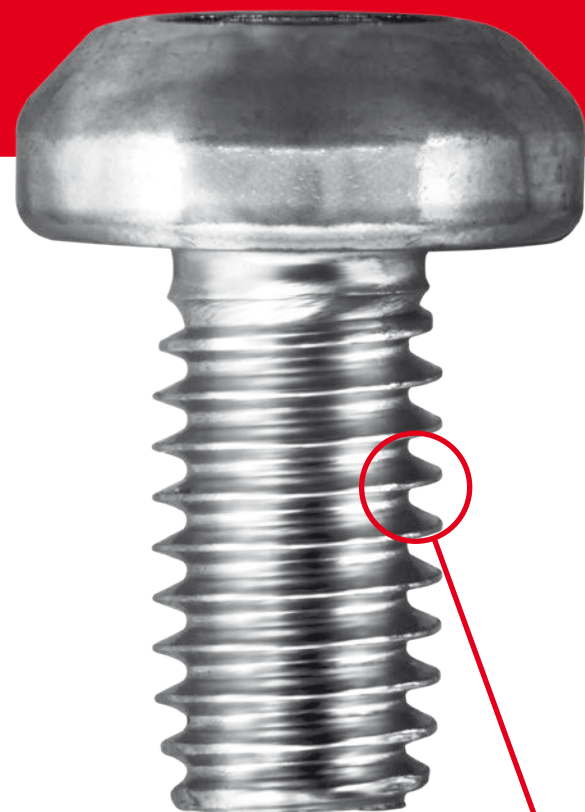


S-trax®

The optimised connection for light metals

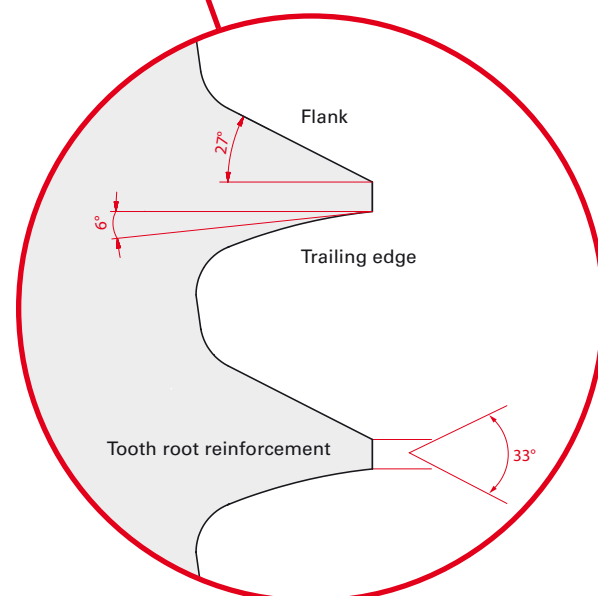
SCHRIEVER S-trax®

The thread forming screw for light metals is the further development of our patented and proven SLS®-screw. It was especially designed for the application in light metals and other nonferrous metals and is used for direct assembly in materials of a max. hardness of 140 HB. The Schriever S-trax®-screw ensures maximum stability in direct applications and cost reduction in the manufacturing process.

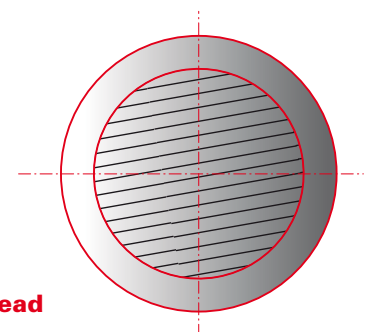


Improved advantages

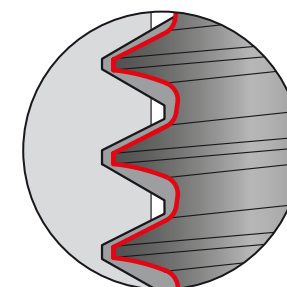
1. Cost savings in processing fees of up to 40 %
2. High tightening torque
3. High breakaway torque
4. Increased load capacity compared to metric screws
5. Increased extraction forces
6. Low installation torque and high pre-load forces
7. Compatible with metric thread



Thread geometry
Flank angle 33°

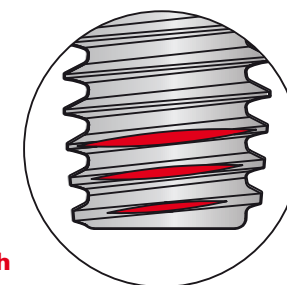


Circular thread cross-section



Metric compatibility

Red line = S-trax®
Black line = metric



Groove tip with 3 groove areas

Optimised thread geometry

1. Ideal flank geometry due to asymmetric flanks leads to improved displacement of material
2. Conical thread core ensures ideal material absorption
3. High flank covering due to circular cross-section provides high level of stability
4. Metrically equivalent through metric thread pitch
5. Groove tip with 3 groove areas provides ideal positioning and excellent fastening properties

Our service

Our technical experts will assist you to ensure an optimal usage of the Schriever S-trax® in your specific application. Your joining applications will be technically optimised in our laboratory and design recommendations provided. You will receive a inspection report free of charge.



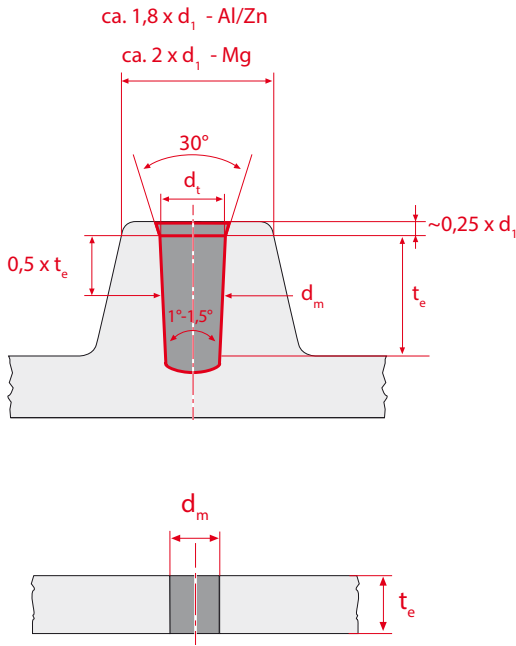
S-trax®



S-trax®

Design recommendations

Recommended for cast, drilled, punched or drawn holes in aluminum, magnesium, zinc, copper, brass and bronze with a hardness up to 140 HB.



Design recommendation

d₁ = Nominal screw diameter
d_m = Central hole diameter
d_t = Top hole diameter
t_e = Screw-in-depth

All dimensions in mm.
For a predrilled design, please select d_m or d_t

d ₁	Predrilled tolerance
1,6-2,0	± 0,03
2,2-3,5	± 0,04
4,0-5,0	± 0,05
6,0-7,0	± 0,07

Hardness	50 - 85 HB			75 - 115 HB				110 - 140 HB		
t _e →	1,0 x d ₁	1,5 x d ₁	2,0 x d ₁	0,5 x d ₁	1,0 x d ₁	1,5 x d ₁	2,0 x d ₁	0,5 x d ₁	1,0 x d ₁	1,5 x d ₁
d1 ↴	d _m	d _m / [d _t]	d _m / [d _t]	d _m	d _m	d _m / [d _t]	d _m / [d _t]	d _m	d _m	d _m / [d _t]
1,6	1,46	1,48 / [1,51]		1,46	1,48	1,49 / [1,52]		1,48	1,49	1,51 / [1,54]
1,8	1,63	1,65 / [1,69]		1,63	1,65	1,67 / [1,71]		1,65	1,67	1,68 / [1,72]
2,0	1,83	1,85 / [1,89]		1,83	1,85	1,87 / [1,91]		1,85	1,87	1,89 / [1,93]
2,2	1,98	2,00 / [2,04]	2,03 / [2,09]	1,98	2,00	2,03 / [2,07]		2,00	2,03	2,05 / [2,09]
2,5	2,20	2,25 / [2,30]	2,30 / [2,37]	2,20	2,25	2,30 / [2,35]	2,35 / [2,42]	2,25	2,30	2,35 / [2,40]
3,0	2,65	2,70 / [2,76]	2,75 / [2,83]	2,65	2,70	2,75 / [2,81]	2,80 / [2,88]	2,70	2,75	2,80 / [2,86]
3,5	3,10	3,15 / [3,22]	3,20 / [3,29]	3,10	3,15	3,20 / [3,27]	3,25 / [3,34]	3,15	3,20	3,25 / [3,32]
4,0	3,55	3,60 / [3,68]	3,65 / [3,75]	3,55	3,60	3,65 / [3,73]	3,70 / [3,80]	3,60	3,65	3,70 / [3,78]
5,0	4,40	4,50 / [4,60]	4,60 / [4,73]	4,40	4,50	4,60 / [4,70]	4,70 / [4,83]	4,50	4,60	4,70 / [4,80]
6,0	5,30	5,40 / [5,52]	5,50 / [5,66]	5,30	5,40	5,50 / [5,62]	5,60 / [5,76]	5,40	5,50	5,60 / [5,72]
7,0	6,20	6,30 / [6,44]	6,40 / [6,58]	6,20	6,30	6,40 / [6,64]	6,60 / [6,78]	6,30	6,40	6,60 / [6,74]

Information on screw-in-depth t_e

- > Recommended minimum screw-in-depth **0,5 x d1**
- > Vibration-proof connection min. **1,5 x d1**
- > High-strength connection **min. 2,0 x d1** (incl. groove zone screw)

Screw-in-depth >2.5 x d1 are not recommended.
(Nominal diameter <2.2 mm:
Screw-in-depth >1.5 x d1 are not recommended.)

Material

The Schrievers S-trax® is produced from high tensile hardened steel and case hardened steel grades acc. to KN 5001 (equivalent to strength class 10.9 for metric screws). Stainless steel (A2 [1.4567], A4 [1.4578]).

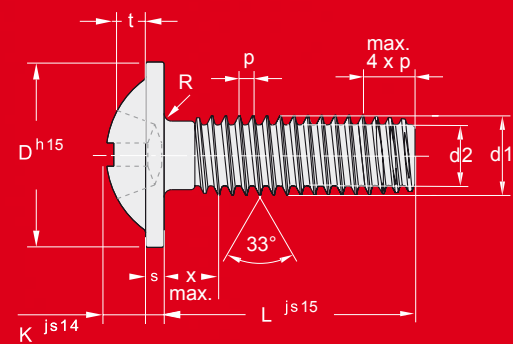
Other materials and customized designs on request.

Lubricant coating by default.
Dimensions Ø <3 mm without lubricant coating.

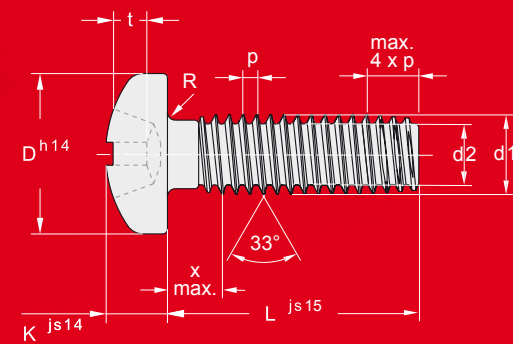
Ordering example
S-trax® of nominal diameter = 3.0 mm
Length = 12 mm · head = KN 5039
Hexalobular drive size 10
KN 5039 S-trax 3x12 -T10- FA-3-FL



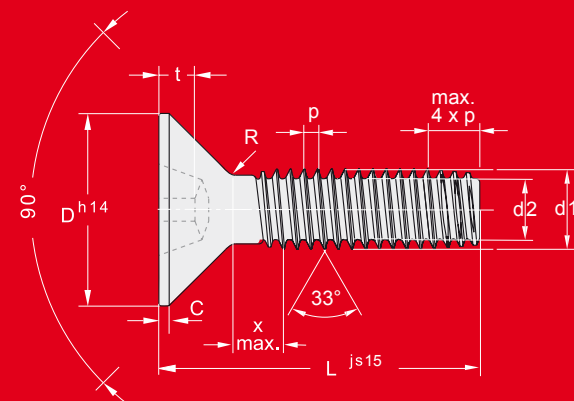
S-trax®



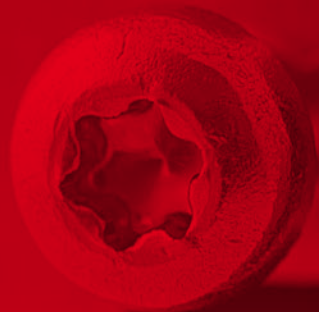
KN 5031				20	22	25	30	35	40	50	60
Dimensions											
Thread outside-Ø	d1			2,0	2,2	2,5	3,0	3,5	4,0	5,0	6,0
Head-Ø	D			5,0	5,5	6,0	7,5	9,0	10	11,5	14,5
Head height + flange	K			1,5	1,6	2,0	2,25	2,5	2,9	3,4	4,4
Flange thickness	s			0,6	0,6	0,6	0,7	0,8	1,0	1,2	1,6
Radius	R max.			0,3	0,3	0,3	0,4	0,4	0,5	0,5	0,6
H-cross recess	t min.			on request				1,15	1,35	1,4	1,8
Penetration depth	t max.							1,55	1,8	2,03	2,46
Z-cross recess	t min.							1,25	1,58	1,47	1,88
Penetration depth	t max.							1,5	1,83	1,93	2,34
Cross size H/Z								1	1	2	2



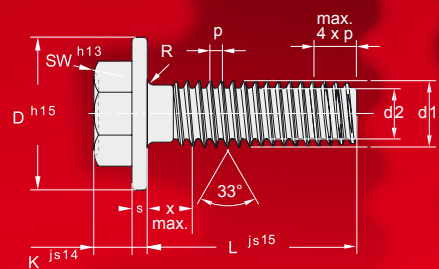
KN 5032				20	22	25	30	35	40	50	60
Dimensions											
Thread outside-Ø	d1			2,0	2,2	2,5	3,0	3,5	4,0	5,0	6,0
Head-Ø	D			4	4,4	5	6	7	8	10	12
Head height	K			1,5	1,6	2	2,4	2,7	3,1	3,8	4,6
Radius	R max.			0,3	0,3	0,3	0,4	0,4	0,5	0,5	0,6
H-cross recess	t min.			0,9	1,1	1,15	1,4	1,4	1,9	2,4	3,1
Penetration depth	t max.			1,2	1,4	1,55	1,8	1,9	2,4	2,9	3,6
Z-cross recess	t min.			0,92	1,1	1,25	1,5	1,48	1,89	2,29	3,03
Penetration depth	t max.			1,17	1,35	1,5	1,75	1,93	2,34	2,74	3,46
Cross size H/Z				0	1	1	1	2	2	2	3



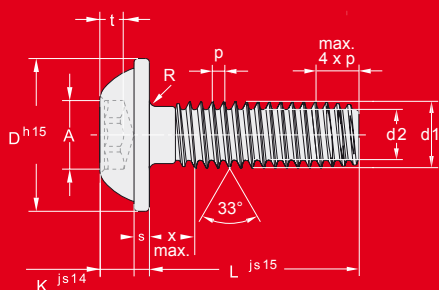
KN 5033				20	22	25	30	35	40	50	60
Dimensions											
Thread outside-Ø	d1			2,0	2,2	2,5	3,0	3,5	4,0	5,0	6,0
Head-Ø	D			3,8	4,4	4,7	5,5	7,3	8,4	9,3	11,3
Cylindrical head height	C max.			0,35	0,45	0,55	0,55	0,65	0,7	0,75	0,85
Radius	R max.			0,5	0,6	0,7	0,8	0,95	1,0	1,3	1,6
H-cross recess	t min.			0,95	0,97	0,97	1,1	1,33	1,59	2,04	2,59
Penetration depth	t max.			1,25	1,43	1,43	1,56	1,96	2,22	2,67	3,22
Z-cross recess	t min.			0,92	1,09	1,09	1,2	1,47	1,7	2,06	2,6
Penetration depth	t max.			1,17	1,35	1,35	1,45	1,93	2,16	2,52	3,06
Cross size H/Z				1	1	1	1	2	2	2	2



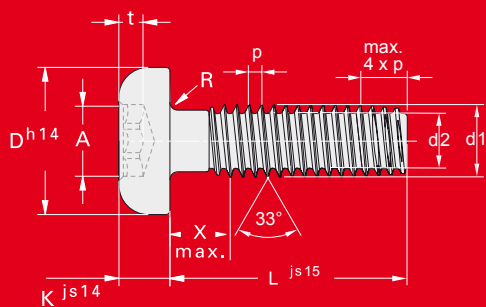
S-trax®



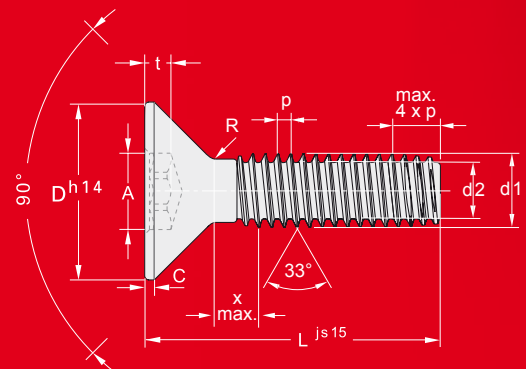
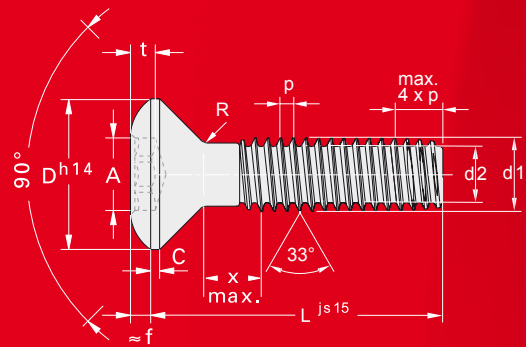
KN 5037				16	18	20	22	25	30	35	40	50	60
Dimensions													
Thread outside-Ø	d1			1,6	1,8	2,0	2,2	2,5	3,0	3,50	4,00	5,00	6,00
Head-Ø	D			on request						8,00	9,00	11,00	13,00
Width across flats (AF size)	SW									6,00	7,00	8,00	10,00
Head height	K									3,00	3,40	4,30	5,00
Flange thickness	s									0,90	0,90	1,10	1,10
Radius	R max.									0,40	0,50	0,50	0,60



KN 5038				16	18	20	22	25	30	35	40	50	60
Dimensions													
Thread outside-Ø	d1			1,60	1,80	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00
Head-Ø	D			4,00	4,50	5,00	5,50	6,00	7,50	9,00	10,00	11,50	14,50
Head height	K			1,20	1,35	1,50	1,60	2,00	2,25	2,50	2,90	3,40	4,40
Flange thickness	s			0,50	0,60	0,60	0,60	0,60	0,70	0,80	1,00	1,20	1,60
Radius	R max.			0,25	0,25	0,30	0,30	0,30	0,40	0,40	0,50	0,50	0,60
Hexalobular drive				T 5	T 6	T 6	T 7	T 8	T 10	T 15	T 20	T 25	T 30
	A Ref.			1,45	1,75	1,75	2,05	2,40	2,80	3,35	3,95	4,50	5,60
Penetration depth	t min.			0,50	0,50	0,65	0,70	0,90	1,00	1,10	1,30	1,50	1,90
	t max.			0,65	0,65	0,85	0,85	1,10	1,30	1,40	1,65	1,85	2,30



KN 5039				16	18	20	22	25	30	35	40	50	60
Dimensions													
Thread outside-Ø	d1			1,60	1,80	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00
Head-Ø	D			3,20	3,60	4,00	4,40	5,00	6,00	7,00	8,00	10,00	12,00
Head height	K			1,30	1,35	1,50	1,60	2,00	2,40	2,70	3,10	3,80	4,60
Radius	R max.			0,20	0,30	0,30	0,30	0,30	0,40	0,40	0,50	0,50	0,60
Hexalobular drive				T 6	T 6	T 6	T 7	T 8	T 10	T 15	T 20	T 25	T 30
	A Ref.			1,75	1,75	1,75	2,05	2,40	2,80	3,35	3,95	4,50	5,60
Penetration depth	t min.			0,50	0,65	0,65	0,70	0,90	1,10	1,10	1,50	1,75	2,20
	t max.			0,65	0,85	0,85	0,85	1,10	1,30	1,40	1,80	1,90	2,60



KN 5040													
Dimensions				16	18	20	22	25	30	35	40	50	60
Thread outside-Ø	d1			1,6	1,8	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00
Head-Ø	D			on request		3,80	4,40	4,70	5,60	6,50	7,50	9,20	11,0
Cylindrical head height	C max.					0,35	0,45	0,55	0,55	0,65	0,75	0,85	
Crown-height	f ≈					0,50	0,60	0,60	0,75	0,90	1,00	1,25	1,00
Radius	R max.					0,50	0,60	0,70	0,80	1,00	1,00	1,30	1,60
Hexalobular drive						T 6	T 7	T 8	T 10	T 15	T 20	T 25	T 30
	A Ref.					1,75	2,05	2,40	2,80	3,35	3,95	4,50	5,60
Penetration depth	t min.					0,65	0,70	0,90	1,10	1,10	1,50	1,50	1,90
	t max.					0,85	0,85	1,15	1,30	1,40	1,80	1,85	2,30

KN 5041													
Dimensions				16	18	20	22	25	30	35	40	50	60
Thread outside-Ø	d1			1,6	1,8	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00
Head-Ø	D			on request		3,80	4,40	4,70	5,50	7,30	8,40	9,30	11,30
Cylindrical head height	C max.					0,35	0,45	0,55	0,55	0,65	0,70	0,75	0,85
Radius	R max.					0,50	0,60	0,70	0,80	0,95	1,00	1,30	1,60
Hexalobular drive						T 6	T 7	T 8	T 10	T 15	T 20	T 25	T 30
	A Ref.					1,75	2,05	2,40	2,80	3,35	3,95	4,50	5,60
Penetration depth	t min.					0,50	0,70	0,70	0,80	0,95	1,10	1,25	1,55
	t max.					0,65	0,85	0,90	1,05	1,20	1,45	1,60	2,00



S-trax®

Tolerances

Nominal size (mm)		h 14	h 15	js 14	js 15
over	to				
0	3	0 /– 0,25	0 /– 0,40	±0,12	±0,20
3	6	0 /– 0,30	0 /– 0,48	±0,15	±0,24
6	10	0 /– 0,36	0 /– 0,58	±0,18	±0,29
10	18	0 /– 0,43	0 /– 0,70	-	±0,35
18	30	0 /– 0,52	0 /– 0,84	-	±0,42
30	50	-	-	-	±0,50
50	80	-	-	-	±0,60
80	100	-	-	-	±0,70

Screw		16	18	20	22	25	30	35	40	50	60	70
Thread outside-Ø	d1	1,60	1,80	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00	7,00
Tolerance outside-Ø		±0,04	±0,04	±0,04	±0,04	±0,05	±0,05	±0,05	±0,06	±0,06	±0,07	±0,07

Nominal diameter		16	18	20	22	25	30	35	40	50	60	70
Thread outside-Ø	d1	1,60	1,80	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00	7,00
Thread core-Ø	d2	1,12	1,32	1,45	1,61	1,88	2,30	2,66	3,02	3,87	4,59	5,56
Thread pitch	p	0,35	0,35	0,40	0,45	0,45	0,50	0,60	0,70	0,80	1,00	1,00
Thread run-out	X max.	0,70	0,70	0,80	0,90	0,90	1,00	1,20	1,40	1,60	2,00	2,00

Head drives



Hexagon
with flange



Hexalobular drive
(T)
Hexalobular drive
plus (TP)



Hexalobular
combi drive
(T ±)



Hexalobular drive
with locking pin
(TT)



H-cross recess
(H)



H-cross
recess combi
(H ±)



Z-cross recess
(Z)



Z-cross
recess combi
(Z ±)

Dimensions 70 on request



Production range

Screw	16	18	20	22	25	30	35	40	50	60	70
d1 (mm)	1,6	1,8	2,0	2,2	2,5	3,0	3,5	4,0	5,0	6,0	7,0
Length L (mm)											
3,5 ± 0,24											
4 ± 0,24											
4,5 ± 0,24											
5 ± 0,24											
6 ± 0,24											
7 ± 0,29											
8 ± 0,29											
9 ± 0,29											
10 ± 0,29											
12 ± 0,35											
14 ± 0,35											
16 ± 0,35											
18 ± 0,35											
20 ± 0,42											
22 ± 0,42											
25 ± 0,42											
30 ± 0,42											
35 ± 0,50											
40 ± 0,50											
50 ± 0,50											
60 ± 0,60											
70 ± 0,60											
80 ± 0,60											
90 ± 0,70											
100 ± 0,70											

Minimum length
(Countersunk screws L + 0.6 x d1)

Maximum length

Special lengths on request.
Production range does not mean parts on stock. We custom-manufacture for you from 10,000 units.

› **Small quantity production**

› 3D - files (drawings)

› Samples for free

› Individually produced for you

› Starting from 10,000 parts

› Available in 4 weeks

› Samples can be tested free of charge

Fast - Fastener - Schriever

Order product samples now

www.schriever-schrauben.de

STS® | **STS® plus** for thermoplastics

SLS® | **S-trax®** for light metals

SBS® for thin sheets

SGF® metric self-trapping screws



STS



STS+



SLS



S-trax



SBS



SGF

TEST THE BEST

Comparison SCHRIEVER -KN- with EJOT -WN-
for the same application areas or purposes



SCHRIEVER KN
S-trax

EJOT WN
Altracs

5031

n.n.

5032

n.n.

5033

n.n.

5037

5147

5038

5151

5039

5152

5040

5153

5041

5154

The Schriever S-trax® screws can also
be used with all commercially available
corrosion protection surfaces. Please
feel free to contact us.

Hans Schriever GmbH & Co. KG · Verbindungstechnik

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