

KSB®

KSB® PRODUCTS

■ self-drilling anchor



Küchler

■ Technik

kuechler-technik.ch



Anchoring

Drilling

Measurement

Injection

THE STRUCTURE OF THE KSB®

ANCHOR PILE // GUIDELINE ITEM NUMBER



20-DRILL BIT

10-ANCHOR ROD

30-SLEEVE

40-SPACER

50-CLADDING TUBE

60-ANCHOR PLATE

70-SCREW-NUT

20 KSB® Drill bit R32/76 mm 3 wing

Item No.	10-	20	032	076	30	
	KSB®	Anchor part	Thread	Outer Ø	Type	Quality
	10	Rod	032 R32	051 130	10 Pin	4 Hard metal
	20	Drill bit	038 R38	076 140	20 Sickle	5 Skirt
	30	Sleeve	051 R51	090 160	30 3 wing	8 Jetting
	40	Spacer	076 T76	095 180	40 Clay	
	50	Cladding tubes	089 T89	100 200	50 Cross	
	60	Anchor plate	114 T114	115 300	60 Segment	
	70	Screw-nut				

10 KSB® Anchor rod R32/20 3 000 mm galv. +epoxy

KSB® Anchor Rod R32 2000 mm galv. epoxy						
Item No.	10-	10	032	20	30	2
	KSB®	Anchor part	Thread	Inner Ø	Type	Quality
		10 Rod	032 R32	22	10	1 galvanized
				20	20 2000 mm	2 galv. + epoxy
				15	30 3000 mm	3 Epoxy
				T	40 4000 mm	

30 KSB® Sleeve R32 Termic galvanized

Item No.	10-	30	032	T		1
	KSB®	Anchor part	Thread	Mass/Type	Type	Quality
	10	Sleeve	032 R32	20	90 N. valve	1 galvanized
				T		3 Epoxy

40 KSB® Spacers R32/65 plastic

Item No.	10-	40	032	70		7
	KSB	Anchor part	Thread	Outer Ø	Type	Quality
		40 Spacer	032 R32	070		7 Plastic

50 KSB® Cladding tube R32

KSB® Cladding tube R32						
Item No.	10-	50	032			
	KSB®	Anchor part	Thread	Outer Ø	Type	Quality
		50 Cladding tube	032 R32		2 Ribbed	7 Plastic

60 KSB® Anchor plate R32 Termic 200 x 200 x 10 mm galvanized

Item No.	10-	60	032	20010		1		
	KSB®	Anchor part		Thread		Mass / Thickness	Type	Quality
		60	Anchor plate	032	R32	150 8		1 galvanized
						200 10		2 galv. + epoxy
						20		3 Epoxy

70 KSB® Screw-nut R32 Termic galvanized

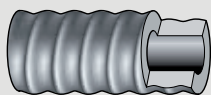
Item No.	10-	70	032	T		1
	KSB®	Anchor part	Thread	Mass/Type	Type	Quality
		70 Screw-nut	032 R32	20		1 galvanized
				T		

KSB®

K = Küchler / SB = Self-drilling anchor

KSB® SELF-DRILLING ANCHOR-SYSTEM

OVERVIEW



Round threads ISO 10208

R32

Page 5

Failure load	253 – 580 kN
Yield strength	202 – 460 kN
Max. test load	182 – 414 kN

R38

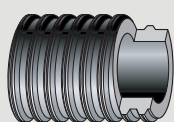
Page 9

Failure load	440 – 820 kN
Yield strength	360 – 650 kN
Max. test load	324 – 585 kN

R51

Page 13

Failure load	660 – 1 200 kN
Yield strength	540 – 1 000 kN
Max. test load	486 – 900 kN



Trapezoidal thread

T64

Page 17

Failure load	1 200 – 1 400 kN
Yield strength	1 000 – 1 100 kN
Max. test load	900 – 990 kN

T76

Page 20

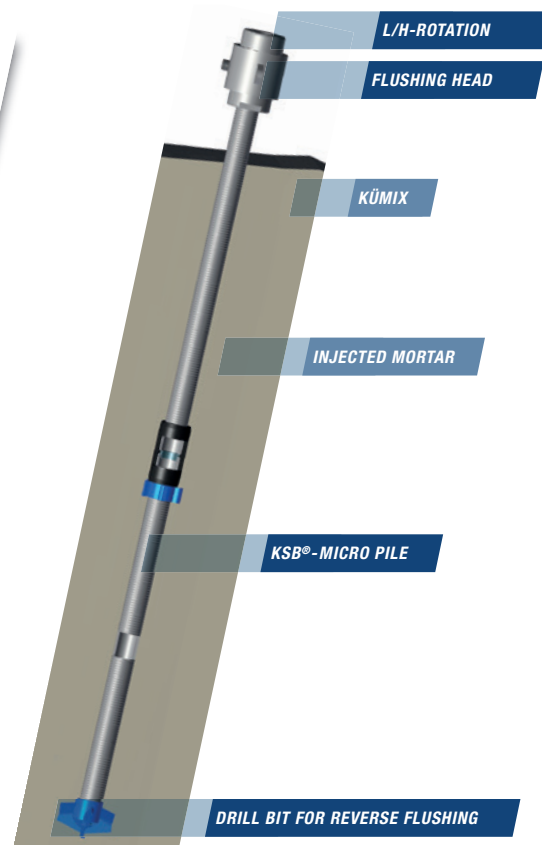
Failure load	850 – 2 200 kN
Yield strength	680 – 1 700 kN
Max. test load	612 – 1 530 kN

T114

Page 24

Failure load	1 650 – 3 450 kN
Yield strength	1 320 – 2 700 kN
Max. test load	1 215 – 2 430 kN

SYSTEM IN USE



JETTING ACCESSORIES

Page 25

FLUSHING HEADS

Page 26

SETTING TOOLS

Page 27

KSB® DRILL BITS

OPTIMAL USE

SOIL TYPE

Clay, sandy, cohesive mixed soil without obstructions > 20 SPT

Mixed soil with blocks up to 50 cm

Densely layered sand and gravel with blocks up to 300 cm

Densely layered sand and gravel with obstruction
Integrate in rock
Medium abrasive

KSB® DRILL BIT TYPE



Clay drill bit



3-wing drill bit



Stepped cross drill bit



Pin drill bit



Jetting bit



Cross drill bit



3-wing drill bit (hard metal)



Pin drill bit (hard metal)

KSB® ANCHOR REDUCTION



R32 / R38
R32 / R51
R38 / R51
R51 / T64



Clay drill bit (welded)



Cross drill bit



Cross drill bit (hard metal)



Mushroom



Segment drill bit

KSB® ANCHOR TYPE

DRILL BIT SIZES diameter in mm

R32 left		51	51	51
	76	76	76	76
		90		100
R38 left	76	76	76	76
		90		90
			100	100
	130			115
	150			
	180			
R51 *T64 left	*130	90	90	*100
	*180		115	*115
			*130	*130
T76 right	140	130		130
	200	170		170
		180		
T114 right	175			175
	200	200		200
	300			

KSB® ANCHOR R32

SPECIFICATIONS

STANDARD B 500

900

■ weak
■ standard
■ strong
■ very strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
 The end of the item number indicates the length of the rod.
 Example 2 meter rod No. 10-10 032 22 20



Item number		10-10 032 22 xx	10-10 032 20 xx	10-10 032 15 xx	10-10 032 05Txx	10-10 032 07T xx
Failure load F_{tk}	kN	250	295	400	450	580
Yield strength F_{yk}^3	kN	200	235	340	380	460
Tensile strength f_{tk}^3	N/mm ²	720	720	700	> 1100	> 1100
Yield point f_{yk}	N/mm ²	580	560	600	> 900	> 900
Nominal outer diameter ²	mm	32	32	32	32	32
Wall thickness	mm	5	6	8.5	5.2	7.2
Steel cross-section ¹ A	mm ²	360	420	580	430	540
Elongation after fracture A_{gt}	%	> 5.0	> 5.0	> 5.0	< 5.0	< 5.0
Ratio f_t / f_y		> 1.15	> 1.15	> 1.15	> 1.15	> 1.15
Weight G	kg/m	2.90	3.40	4.55	3.3	4.3
Thread direction		left	left	left	left	left
Max. test load (0.9 F_{yk}) F_p	kN	183	212	306	342	414
Torsional resistance T_{Rd}	Nm	1 826	1 962	2 433	2 903	3 442
Shearing resistance Q_{Rd}	kN	112	129	191	208	267
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	20	25	28	28	32
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	18	18	25	25	28

KSB® Anchor galvanized +epoxy (with corrosion protection)

Anchor galvanized only, on demand

	galv. + epoxy on request	galv. + epoxy	galv. + epoxy	galv. + epoxy on request	galv. + epoxy on demand
Item number		10-10 032 20 xx-2	10-10 032 15 xx-2		

SERVICE LOADS / APPLICATIONS

for piles

Service load $F_{yk}/1.75$ F	kN	114	134	194	217	263
with nails in full composite						
Service load $F_{yk}/1.75$ F	kN	114	134	194	217	263
with prestressed anchor						
Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	150	177	240	not suitable	not suitable

Corresponds to B500B according to SIA 262
 Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \times m / 7.850$ (kg/m³)

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

KSB® ITEM OVERVIEW R32

DRILL BITS

 KSB® PIN DRILL BIT Ø 51 mm Weight/pcs. 0.54 kg Item No. 10-20 032 051 10	 KSB® PIN DRILL BIT Ø 51 mm Skirt Hard metal weight/pcs. 0.70 kg Item No. 10-20 032 051 10-5	 KSB® PIN DRILL BIT Ø 51 mm hard metal (6-pin) Weight/pcs. 0.48 kg Item No. 10-20 032 051 11-4	 KSB® PIN DRILL BIT Ø 51 mm Hard metal (8-pin) Weight/pcs. 0.48 kg Item No. 10-20 032 051 12-4
 KSB® CROSS DRILL BIT Ø 51 mm standard Weight/pcs. 0.38 kg Item No. 10-20 032 051 50	 KSB® CROSS DRILL BIT Ø 51 mm Hard metal Weight/pcs. 0.42 kg Item No. 10-20 032 051 50-4	 KSB® SEGMENT DRILL BIT Ø 51 mm Weight/pcs. 0.50 kg Item No. 10-20 032 051 60	 KSB® PIN DRILL BIT Ø 76 mm Weight/pcs. 1.20 kg Item No. 10-20 032 076 10
 KSB® PIN DRILL BIT Ø 76 mm Hard metal Weight/pcs. 1.16 kg Item No. 10-20 032 076 10-4	 KSB® PIN DRILL BIT Ø 76 mm Skirt Hardmetal Weight/pcs. 2.22 kg Item No. 10-20 032 076 10-5	 KSB® 3-WING DRILL BIT Ø 76 mm Weight/pcs. 1.17 kg Item No. 10-20 032 076 30	 KSB® 3-WING DRILL BIT Ø 76 mm Hard metal Weight/pcs. 1.12 kg Item No. 10-20 032 076 30-4
 KSB® CLAY DRILL BIT Ø 76 mm Cast Weight/pcs. 0.64 kg Item No. 10-20 032 076 40	 KSB® 3-WING DRILL BIT Ø 90 mm Weight/pcs. 1.72 kg Item No. 10-20 032 090 30	 KSB® PIN DRILL BIT Ø 100 mm Weight/pcs. 2.16 kg Item No. 10-20 032 100 10	 KSB® PIN DRILL BIT Ø 100 mm hardmetal Weight/pcs. 2.30 kg Item No. 10-20 032 100 10-4

ANCHOR REDUCTION

R32

KSB® ANCHOR REDUCTION
R38 AG / R 32 IG

Weight/pcs. 0.10 kg

Item No. 10-20 032 90 038



R32

KSB® ANCHOR REDUCTION
R51 AG / R32 IG

Weight/pcs. 0.10 kg

Item No. 10-20 032 90 051

For reducing the thread of the drill bit, so that the drill bits type R38 and R51 can be used on R32 anchor rods.

SLEEVES

R32

KSB® SLEEVE

Weight/pcs. 0.60 kg

Item No. 10-30 032



R32

KSB® SLEEVE
Termic

Weight/pcs. 0.66 kg

Item No. 10-30 032 T

galvanized

-1



R32

KSB® SLEEVE
with re-injection valve

Weight/pcs. 0.60 kg

Item No. 10-30 032 90

Item number supplement

-1 = galvanized

SCREW NUTS

R32

KSB® SCREW NUT
standard

Weight/pcs. 0.34 kg

Item No. 10-70 032



R32

KSB® SCREW NUT WITH EYELET
100 kN

Weight/pcs. 0.56 kg

Item No. 10-70 032 90 10

galvanized

-1



R32

KSB® DOMED ANCHOR NUT

Weight/pcs. 0.53 kg

Item No. 10-70 032 91

Item number supplement

-1 = galvanized



R32

KSB® SCREW NUT
Termic

Weight/pcs. 0.36 kg

Item No. 10-70 032 T

galvanized

-1



R32

KSB® SCREW NUT WITH EYELET
300 kN Termic

Weight/pcs. 1.15 kg

Item No. 10-70 032 T90 30

galvanized

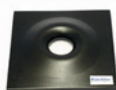
-1

july 2017

ANCHOR PLATES

Further anchor plate sizes
on request.

Item number supplement
-1 = galvanized

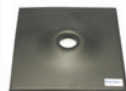


R32

KSB® ANCHOR PLATES
convexed 150 x 150 x 8 mm
Weight/pcs. 1.38 kg

Item No. 10-60 032 150 08

galvanized -1

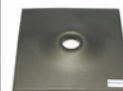


R32

KSB® ANCHOR PLATES
200 x 200 x 8 mm convexed
Weight/pcs. 2.50 kg

Item No. 10-60 032 200 08

galvanized -1



R32

KSB® ANCHOR PLATES
200 x 200 x 10 mm convexed
Weight/pcs. 2.96 kg

Item No. 10-60 032 200 10

galvanized -1



R32

KSB® ANCHOR PLATES
200 x 200 x 20 mm
Weight/pcs. 6.06 kg

Item No. 10-60 032 200 20

galvanized -1

ACCESSORIES

SPACER



R32

KSB® SPACER
Plastic

Item No. 10-40 032-2



R32

KSB® SPACER
Steel

Item No. 10-41 032-6

CLADDING TUBE



R32

KSB® ANCHOR CLADDING TUBE
PE 40 x 36 mm

Length 2 800 mm
Weight/pcs. 0.85 kg

Item No. 10-50 032

K SUPPORT DRILLING SYSTEM



R32/60

KSB® SUPPORT DRILL TUBE
Termic / Ø 60.3 mm

Item No. 10-50 10 032 T50 060



R32/76

KSB® SUPPORT DRILL TUBE
Termic / Ø 76.1 mm

Item No. 10-50 10 032 T50 076



R32/60

K SUPPORT TUBE SHOCK
SLEEVE
Ø 60.3 mm

Item No. 10-50 300 60



R32/76

K SUPPORT TUBE SHOCK
SLEEVE
Ø 76.1 mm

Item No. 10-50 300 76

KSB® ANCHOR R38

SPECIFICATIONS

■ weak
■ standard
■ strong
■ very strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
 The end of the item number indicates the length of the rod.
 Example 2 meter rod No. 10-10 032 22 20

STANDARD B 500



KSB® Anchor R38/17



KSB® Anchor R38/15



KSB® Anchor R38/5T



KSB® Anchor R38/7T



KSB® Anchor R38/8T

Item number		10-10 038 17 xx	10-10 038 15 xx	10-10 038 05T xx	10-10 038 07T xx	10-10 038 08T xx
Failure load F_{tk}	kN	500	580	580	700	820
Yield strength F_{yk}^3	kN	400	450	480	600	650
Tensile strength f_{tk}^3	N/mm ²	700	700	> 1100	> 1100	> 1100
Yield point f_{yk}	N/mm ²	600	600	> 900	> 900	> 900
Nominal outer diameter ²	mm	38	38	38	38	38
Wall thickness	mm	10.5	11.5	5.2	7.1	8.2
Steel cross-section ¹ A	mm ²	740	840	540	700	760
Elongation after fracture A_{gt}	%	> 5.0	> 5.0	< 5.0	< 5.0	< 5.0
Ratio f_t / f_y		> 1.15	> 1.15	> 1.15	> 1.15	> 1.15
Weight G	kg/m	5.80	6.60	4.3	5.5	6.2
Thread direction		left	left	left	left	left
Max. test load (0.9 F_{yk}) F_p	kN	360	405	432	540	585
Torsional resistance T_{Rd}	Nm	4 115	4 185	3 353	3 994	4 243
Shearing resistance Q_{Rd}	kN	244	277	267	346	376
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	32	32	32	32	40
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	28	28	30	30	35

KSB® Anchor galvanized +epoxy (with corrosion protection)

Anchor galvanized only, on demand



**galv. + epoxy
on request**



**galv. + epoxy
on request**



verz. + Epoxy



verz. + Epoxy



**galv. + epoxy
on request**

Item number		10-10 038 17 xx-2		10-10 038 05T xx-2	10-10 038 07T xx-2	
-------------	--	-------------------	--	--------------------	--------------------	--

SERVICE LOADS / APPLICATIONS

for piles

Service load $F_{yk}/1.75$ F	kN	229	257	274	343	371
with nails in full composite						
Service load $F_{yk}/1.75$ F	kN	229	257	274	343	371
with prestressed anchor						
Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	300	348	not suitable	not suitable	not suitable

Corresponds to B500B according to SIA 262
 Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \times m / 7.850$ (kg/m³)

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

KSB® ITEM OVERVIEW R38

DRILL BITS

 KKS® PIN DRILL BIT Ø 76 mm Weight/pcs. 1.06 kg Item No. 10-20 038 076 10	 KSB® PIN DRILL BIT Ø 76 mm Hard metal Weight/pcs. 1.04 kg Item No. 10-20 038 076 10-4	 KSB® PIN DRILL BIT Ø 76 mm Hard metal skirt Weight/pcs. 1.82 kg Item No. 10-20 038 076 10-5	 KSB® PIN DRILL BIT Ø 76 mm Hard metal mushroom Weight/pcs. 1.54 kg Item No. 10-20 038 076 10-6
 KSB® 3-WING DRILL BIT Ø 76 mm Weight/pcs. 0.94 kg Item No. 10-20 038 076 30	 KSB® 3-WING DRILL BIT Ø 76 mm Hard metal Weight/pcs. 0.94 kg Item No. 10-20 038 076 30-4	 KSB® CLAY DRILL BIT Ø 76 mm Cast Weight/pcs. 0.72 kg Item No. 10-20 038 076 40	 KSB® PIN DRILL BIT Ø 90 mm Weight/pcs. 2.20 kg Item No. 10-20 038 090 10
 KSB® PIN DRILL BIT Ø 90 mm Hard metal Weight/pcs. 2.20 kg Item No. 10-20 038 090 10-4	 KSB® 3-WING DRILL BIT Ø 90 mm Weight/pcs. 1.28 kg Item No. 10-20 038 090 30	 KSB® 3-WING DRILL BIT Ø 90 mm JETTING Weight/pcs. 2.60 kg excl. nozzles and copper ring Item No. 10-20 038 090 30-8	 KSB® PIN DRILL BIT Ø 100 mm Weight/pcs. 2.06 kg Item No. 10-20 038 100 10
 KSB® PIN DRILL BIT Ø 100 mm Hard metal Weight/pcs. 2.20 kg Item No. 10-20 038 100 10-4	 KSB® STEPPED CROSS DRILL BIT hard metal Weight/pcs. 2.20 kg Item No. 10-20 038 090 53-4	 KSB® PIN DRILL BIT Ø 115 mm Drop center Weight/pcs. 2.34 kg Item No. 10-20 038 115 10	 KSB® PIN DRILL BIT Ø 115 mm Hard metal drop center Weight/pcs. 2.48 kg Item No. 10-20 038 115 10-4

R38/130



KSB® CLAY DRILL BIT
Ø 130 mm
Cast
Weight/pcs. 1.89 kg
Item No. 10-20 038 130 40

R38/130



KSB® CLAY DRILL BIT
Ø 130 mm
JETTING, welded
Weight/pcs. 1.42 kg
excl. nozzles and copper ring
Item No. 10-20 038 130 49-8

R38/150



KSB® CLAY DRILL BIT
Ø 150 mm
JETTING, welded
Weight/pcs. 1.54 kg
excl. nozzles and copper ring
Item No. 10-20 038 150 49-8

R38/180



KSB® CLAY DRILL BIT
Ø 180 mm
JETTING, welded
Weight/pcs. 1.80 kg
excl. nozzles and copper ring
Item No. 10-20 038 180 49-8

ANCHOR REDUCTION

R38



KSB® ANCHOR REDUCTION
R51 AG / R38 IG
Weight/pcs. 0.35 kg
Item No. 10-20 038 90 051

SLEEVES

Item number supplement
-1 = galvanized
-2 = galvanized and epoxy

R38



KSB® SLEEVE
Weight/pcs. 1.25 kg
Item No. 10-30 038
galvanized -1

R38



KSB® SLEEVE
with re-injection valve
Weight/pcs. 1.20 kg
Item No. 10-30 038 90

R38



KSB® SLEEVE
Termic strong
Weight/pcs. 1.25 kg
Item No. 10-30 038 TS
galvanized -1

SCREW NUTS

Item number supplement
-1 = galvanized

R38



KSB® SCREW NUT
standard
Weight/pcs. 0.96 kg
Item No. 10-70 038

R38



KSB® DOMED ANCHOR NUT
Weight/pcs. 0.73 kg
Item No. 10-70 038 91

R38



KSB® SCREW NUT
Termic
Weight/pcs. 0.54 kg
Item No. 10-70 038 T
galvanized -1

R38



KSB® SCREW NUT
Termic strong
Weight/pcs. 0.78 kg
Item No. 10-70 038 TS
galvanized -1

R38

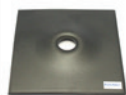


KSB® SCREW NUT WITH EYELET
300 kN Termic
Weight/pcs. 1.20 kg
Item No. 10-70 038 T90 30
galvanized -1

ANCHOR PLATES

Further anchor plate sizes
on request

Item number supplement
-1 = galvanized



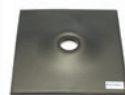
R38

KSB® ANCHOR PLATES
200 x 200 x 10 mm convexed
Failure load 350 kN
Weight/pcs. 3.00 kg

Item No. 10-60 038 200 10

galvanized

-1



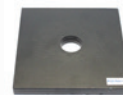
R38

KSB® ANCHOR PLATES
200 x 200 x 12 mm convexed
Weight/pcs. 3.76 kg

Item No. 10-60 038 200 12

galvanized

-1



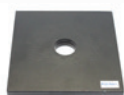
R38/TS

KSB® ANCHOR PLATES
Termic strength
200 x 200 x 20 mm
Weight/pcs. 6.00 kg

Item No. 10-60 038 200 20

galvanized

-1



R38

KSB® ANCHOR PLATES
250 x 250 x 25 mm
Center hole 45 mm
Weight/pcs. 12.5 kg

Item No. 10-60 038 250 25

galvanized

-1



R38

KSB® ANCHOR WEDGE PLATE
200 x 200 x 20 mm 15°
Weight/pcs. 6.70 kg

Item No. 10-60 038 90 200 20 15

galvanized

-1



R38

KSB® ANCHOR WEDGE PLATE
200 x 200 x 20 mm 20°
Weight/pcs. 10.70 kg

Item No. 10-60 038 90 200 20 20



R38

KSB® ANCHOR WEDGE PLATE
200 x 200 x 20 mm 30°
Weight/pcs. 7.00 kg

Item No. 10-60 038 90 200 20 30

ACCESSORIES**SPACER**

R38

KSB® SPACER
Plastic

Item No. 10-40 038-2



R38

KSB® SPACER
Steel

Item No. 10-41 038-6

CLADDING TUBE

R38

KSB® ANCHOR CLADDING TUBE
PE 40 x 36 mm
Length 2 800 mm
Weight/pcs. 0.85 kg

Item No. 10-50 038

SUPPORT DRILLING SYSTEM

R38/76

K SUPPORT DRILLING SYSTEM
Termic / Ø 76.1 mm

Item No. 10-50 10 038 T50 076



R38/89

K SUPPORT DRILLING SYSTEM
Termic / Ø 88.9 mm

Item No. 10-50 10 038 T50 089



R38/76

K SUPPORT TUBE SHOCK
SLEEVE
Ø 76.1 mm

Item No. 10-50 300 76



R38/89

K SUPPORT TUBE SHOCK
SLEEVE
Ø 88.9 mm

Item No. 10-50 300 89

KSB®-ANCHOR R51

SPECIFICATIONS

STANDARD B 500

900

■ weak
■ standard
■ strong
■ very strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
 The end of the item number indicates the length of the rod.
 Example 2 meter rod No. 10-10 032 22 20

**KSB® Anchor
R51/35**

**KSB® Anchor
R51/28**

**KSB® Anchor
R51/25**

**KSB® Anchor
R51/7T**

**KSB® Anchor
R51/9T**

Item number		10-10 051 35 xx	10-10 051 28 xx	10-10 051 25 xx	10-10 051 07T xx	10-10 051 09T xx
Failure load F_{tk}	kN	660	800	1 000	1 000	1 200
Yield strength F_{yk}^3	kN	540	630	800	800	1 000
Tensile strength f_{tk}^3	N/mm ²	680	650	760	> 1 100	> 1 100
Yield point f_{yk}	N/mm ²	570	520	590	> 900	> 900
Nominal outer diameter ²	mm	51	51	51	51	51
Wall thickness	mm	8	11.5	12.5	7.1	9.4
Steel cross-section ¹ A	mm ²	970	1 250	1 370	940	1 190
Elongation after fracture A_{gt}	%	> 5.0	> 5.0	> 5.0	< 5.0	< 5.0
Ratio f_t / f_y		> 1.15	> 1.15	> 1.15	> 1.15	> 1.15
Weight G	kg/m	7.60	8.80	10.80	7.4	9.4
Thread direction		left	left	left	left	left
Max. test load (0.9 F_{yk}) F_p	kN	486	567	720	720	900
Torsional resistance T_{Rd}	Nm	7 282	8 059	9 442	10 637	12 645
Shearing resistance Q_{Rd}	kN	304	357	444	465	589
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	32	40	40	40	50
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	30	30	35	35	43

KSB® Anchor galvanized +epoxy (with corrosion protection)

Anchor galvanized only, on demand

galv. + epoxy
on request

verz. + Epoxy

verz. + Epoxy

galv. + epoxy
on request

galv. + epoxy
on request

Item number			10-10 051 28 xx-2	10-10 051 25 xx-2	10-10 051 07T xx-2	
-------------	--	--	-------------------	-------------------	--------------------	--

SERVICE LOADS / APPLICATIONS

for piles

Service load $F_{yk}/1.75$ F	kN	309	360	457	457	571
------------------------------	----	-----	-----	-----	-----	-----

with nails in full composite

Service load $F_{yk}/1.75$ F	kN	309	360	457	457	571
------------------------------	----	-----	-----	-----	-----	-----

with prestressed anchor

Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	396	480	600	not suitable	not suitable
--	----	-----	-----	-----	--------------	--------------

Corresponds to B500B according to SIA 262
 Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \times m / 7.850$ (kg/m³)

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

july 2017

KSB® ITEM OVERVIEW R51

DRILL BITS



R51/90

KSB® PIN DRILL BIT
Ø 90 mm
Hard metal

Weight/pcs. 1.82 kg

Item No. 10-20 051 090 10-4



R51/90

KSB® 3-WING DRILL BIT
Ø 90 mm
JETTING

Weight/pcs. 2.68 kg
excl. nozzles and copper ring

Item No. 10-20 051 090 30-8



R51/95

KSB® 3-WING DRILL BIT
Ø 95 mm

Weight/pcs. 1.24 kg

Item No. 10-20 051 095 30



R51/100

KSB® PIN DRILL BIT
Ø 100 mm

Weight/pcs. 1.94 kg

Item No. 10-20 051 100 10



R51/100

KSB® PIN DRILL BIT
Ø 100 mm
Hard metal

Weight/pcs. 1.90 kg

Item No. 10-20 051 100 10-4



R51/115

KSB® PIN DRILL BIT
Ø 115 mm

Weight/pcs. 2.10 kg

Item No. 10-20 051 115 10



R51/115

KSB® PIN DRILL BIT
Ø 115 mm
Hard metal

Weight/pcs. 2.32 kg

Item No. 10-20 051 115 10-4



R51/115

KSB® CROSS DRILL BIT
Hard metal

Weight/pcs. 2.32 kg

Item No. 10-20 051 051 115-4



R51/130

KSB® PIN DRILL BIT
Ø 130 mm
Mushroom

Weight/pcs. 2.20 kg

Item No. 10-20 051 130 10



R51/130

KSB® PIN DRILL BIT
Ø 130 mm
Hard metal

Weight/pcs. 3.50 kg

Item No. 10-20 051 130 10-4



R51/130

KSB® 3-WING DRILL BIT
Ø 130 mm
JETTING

Weight/pcs. 2.60 kg
excl. nozzles and copper ring

Item No. 10-20 051 130 30-8



R51/130

KSB® CLAY DRILL BIT
Ø 130 mm
Cast

Weight/pcs. 1.86 kg

Item No. 10-20 051 130 40



R51/150

KSB® CLAY DRILL BIT
Ø 150 mm
JETTING blunt

Weight/pcs. 1.80 kg
excl. nozzles and copper ring

Item No. 10-20 051 150 49-8



R51/180

KSB® CLAY DRILL BIT
Ø 180 mm
JETTING, welded

Weight/pcs. 2.14 kg
excl. nozzles and copper ring

Item No. 10-20 051 180 49-8

SLEEVES

Item number supplement

-1 = galvanized



R51

KSB® SLEEVE

Weight/pcs. 1.82 kg

Item No. 10-30 051

galvanized

-1



R51

KSB® SLEEVE

Weight/pcs. 1.82 kg

Item No. 10-30 051 TS



R51

**KSB® SLEEVE
with subsequent injection
valve**

Weight/pcs. 2.00 kg

Item No. 10-30 051 90

SCREW NUTS



R51

**KSB® SCREW NUT
standard**

Weight/pcs. 1.06 kg

Item No. 10-70 051



R51

KSB® DOMED ANCHOR NUT

Weight/pcs. 1.54 kg

Item No. 10-70 051 91



R51

**KSB® SCREW NUT
Termic**

Weight/pcs. 1.54 kg

Item No. 10-70 051 T

galvanized

-1



R51

**KSB® LOCKNUT
Termic**

Weight/pcs. 1.06 kg

Item No. 10-70 051 90

ANCHOR PLATES



R51

**KSB® ANCHOR PLATES
200 x 200 x 20 mm**Center hole 60 mm
Weight/pcs. 1.38 kg

Item No. 10-60 051 200 20

galvanized

-1



R51

**KSB® ANCHOR PLATES
250 x 250 x 20 mm**Center hole 60 mm
Weight/pcs. 10.00 kg

Item No. 10-60 051 250 20



R51

**KSB® ANCHOR PLATES
250 x 250 x 25 mm**Center hole 60 mm
Weight/pcs. 14.10 kg

Item No. 10-60 051 250 25



R51

**KSB® PILE-HEAD
250 x 250 x 25 mm**incl. Welded pipe
Weight/pcs. 13.90 kg

Item No. 10-60 051 250 25 91



R51

**KSB® ANCHOR PLATES
250 x 250 x 30 mm**

Weight/pcs. 14.10 kg

Item No. 10-60 051 250 25

galvanized

-1



R51

**KSB® ANCHOR PLATES
300 x 300 x 20 mm**

Weight/pcs. 14.40 kg

Item No. 10-60 051 300 20

galvanized

-1



R51

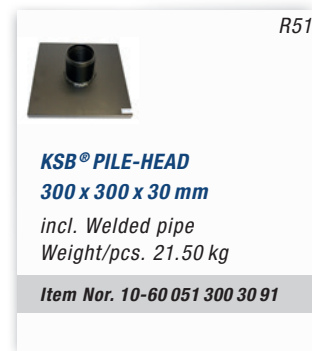
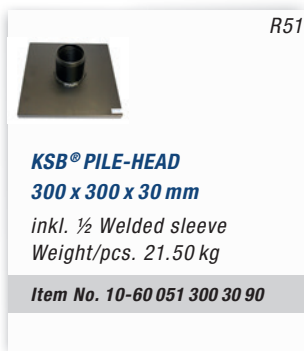
**KSB® ANCHOR PLATES
300 x 300 x 30 mm**

Weight/pcs. 21.40 kg

Item No. 10-60 051 300 30

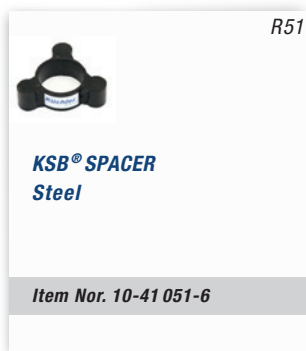
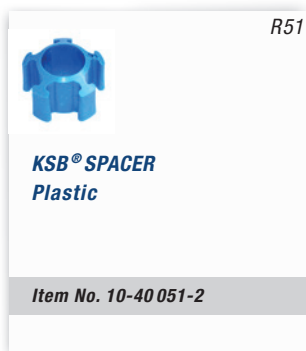
galvanized

-1



ACCESSORIES

SPACER



CLADDING TUBE



K SUPPORT DRILLING SYSTEM



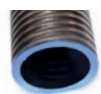
KSB®-ANCHOR T64

SPECIFICATIONS

■ weak
■ standard
□ strong
■ very strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
The end of the item number indicates the length of the rod.
Example 2 meter rod No. 10-10 032 22 20

STANDARD B 500



*

**KSB® Anchor
T64/42**



*

**KSB® Anchor
T64/36**

Item number		10-10 064 42 xx	10-10 064 36 xx
Failure load F_{tk}	kN	1 200	1 400
Yield strength F_{yk}^3	kN	1 000	1 100
Tensile strength f_{tk}^3	N/mm ²	750	750
Yield point f_{yk}	N/mm ²	580	580
Nominal outer diameter ²	mm	64	64
Wall thickness	mm	11	13
Steel cross-section ¹ A	mm ²	1 730	1 930
Elongation after fracture A_{gt}	%	> 5.0	> 5.0
Ratio f_t / f_y		> 1.15	> 1.15
Weight G	kg/m	13.60	15.20
Thread direction		left	left
Max. test load (0.9 F_{yk}) F_p	kN	900	990
Torsional resistance T_{Rd}	Nm	15 479	16 939
Shearing resistance Q_{Rd}	kN	552	616
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	50	50
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	43	43

KSB® Anchor galvanized +epoxy (with corrosion protection)

Anchor galvanized only, on demand

**galv. + epoxy
on request**

**galv. + epoxy
on request**

Item number			
SERVICE LOADS / APPLICATIONS			
for piles			
Service load $F_{yk}/1.75$ F	kN	571	629
with nails in full composite			
Service load $F_{yk}/1.75$ F	kN	571	629
with prestressed anchor			
Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	720	840

Corresponds to B500B according to SIA 262
Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \text{ x m} / 7.850 \text{ (kg/m}^3\text{)}$

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

KSB® ITEM OVERVIEW T64

DRILL BITS

T64/100



KSB® PIN DRILL BIT
Ø 100 mm
Hard metal
Weight/pcs. 3.25 kg

Item No. 10-20 064 100 10-4

T64/115



KSB® KREUZBOHRKRONE
Ø 115 mm
Hard metal
Weight/pcs. 2.35 kg

Item No. 10-20 064 115 50-4

T64/130



KSB® PIN DRILL BIT
Ø 130 mm
Mushroom
Weight/pcs. 4.00 kg

Item No. 10-20 064 130 10

T64/130



KSB® PIN DRILL BIT
Ø 130 mm
Hard metal
Weight/pcs. 4.15 kg

Item No. 10-20 064 130 10-4

T64/130



KSB® WING DRILL BIT
Ø 130 mm

Weight/pcs. 2.45 kg

Item No. 10-20 064 130 50

R51/130



KSB® CLAY DRILL BIT
Ø 130 mm

Item No. 10-20 064 130 49

ADAPTER

R51/T64



KSB® DRILL BITS ADAPTER

Weight/pcs. 1.85 kg

Item No. 10-200 064

SLEEVES

T64/76



KSB® SLEEVE

Weight/pcs. 1.85 kg

Item No. 10-30 064

galvanized

-1

Artikelnummerzusatz

-1 = galvanized

SCREW NUTS

T64



KSB® SCREW NUT
Standard

Weight/pcs. 1.62 kg

Item No. 10-70 064

galvanized

-1

Artikelnummerzusatz

-1 = galvanized

ANCHOR PLATES

T64



KSB® ANCHOR PLATE
200 x 200 x 20 mm
Center hole 68 mm

Item No. 10-60 064 200 20
galvanized -1

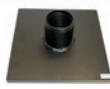
T64



KSB® ANCHOR PLATE
250 x 250 x 20 mm

Item No. 10-60 064 250 20

T64



KSB® PILE-HEAD *
250 x 250 x 25 mm
incl. Welded pipe

Item No. 10-60 064 250 25 91

T64



KSB® ANCHOR PLATE
250 x 250 x 30 mm

Item No. 10-60 064 250 25

R51



KSB® ANGEL PLATE
120 x 35 mm 10°
Center hole 70 mm
Weight/pcs. 1.70 kg

Item No. 10-60 064 90 120 35 10

R51



KSB® ANGEL PLATE
120 x 55 mm 20°
Center hole 70 mm
Weight/pcs. 1.70 kg

Item No. 10-60 064 90 120 55 20

ACCESSORIES**SPACER**

T64



KSB® SPACER
Steel

Item No. 10-41 064-6

CLADDING TUBE

T64



KSB® ANCHOR CLADDING TUBE
PE 73 x 65 mm
Length 280 mm

Item No. 10-50 064

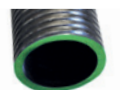
KSB® ANCHOR T76

SPECIFICATIONS

STANDARD B 500

■ weak
■ standard
□ strong
■ very strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
The end of the item number indicates the length of the rod.
Example 2 meter rod No. 10-10 032 22 20



*

**KSB® Anchor
T76/59**



**KSB® Anchor
T76/55**



*

**KSB® Anchor
T76/51**



*

**KSB® Anchor
T76/41**

Item number		10-10 076 59 xx	10-10 076 55 xx	10-10 076 51 xx	10-10 076 41 xx
Failure load F_{tk}	kN	1 100	1 300	1 600	2 000
Yield strength F_{yk}^3	kN	850	1 050	1 300	1 600
Tensile strength f_{tk}^3	N/mm ²	650	650	650	750
Yield point f_{yk}	N/mm ²	520	520	520	570
Nominal outer diameter ²	mm	76	76	76	76
Wall thickness	mm	8	10	12.5	16
Steel cross-section ¹ A	mm ²	1 780	2 120	2 500	2 840
Elongation after fracture Agt	%	> 5.0	> 5.0	> 5.0	> 5.0
Ratio ft / fy		> 1.15	> 1.15	> 1.15	> 1.15
Weight G	kg/m	14.00	17.00	19.60	22.30
Thread direction		right	right	right	right
Max. test load (0.9 F_{yk}) F_p	kN	765	945	1 170	1 440
Torsional resistance T_{Rd}	Nm	16 614	19 564	22 638	28 357
Shearing resistance Q_{Rd}	kN	509	606	715	890
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	40	50	50	50
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	35	43	43	43

KSB® Anchor galvanized +epoxy

(with corrosion protection)

Anchor galvanized only, on demand

galv. + epoxy
on request

galv. + epoxy
on request

galv. + epoxy
on request

galv. + epoxy
on request

Item number					
-------------	--	--	--	--	--

SERVICE LOADS / APPLICATIONS

for piles

Service load $F_{yk}/1.75$ F	kN	486	600	743	914
------------------------------	----	-----	-----	-----	-----

with nails in full composite

Service load $F_{yk}/1.75$ F	kN	486	600	743	914
------------------------------	----	-----	-----	-----	-----

with prestressed anchor

Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	660	780	960	1 200
--	----	-----	-----	-----	-------

Corresponds to B500B according to SIA 262

Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \times m / 7.850$ (kg/m³)

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

■ weak
■ standard
■ strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
 The end of the item number indicates the length of the rod.
 Example 2 meter rod No. 10-10 032 22 20



Item number		10-10 076 06T xx	10-10 076 08T xx	10-10 076 10T xx
Failure load F_{tk}	kN	1 400	1 800	2 200
Yield strength F_{yk}^3	kN	1 100	1 400	1 700
Tensile strength f_{tk}^3	N/mm ²	> 1 100	> 1 100	> 1 100
Yield point f_{yk}	N/mm ²	> 900	> 900	> 900
Nominal outer diameter ²	mm	76	76	76
Wall thickness	mm	6.3	8	10
Steel cross-section ¹ A	mm ²	1 450	1 780	2 120
Elongation after fracture A_{gt}	%	< 5.0	< 5.0	< 5.0
Ratio f_t / f_y		> 1.15	> 1.15	> 1.15
Weight G	kg/m	10.8	13.5	16.3
Thread direction		right	right	right
Max. test load (0.9 F_{yk}) F_p	kN	990	1 260	1 530
Torsional resistance T_{Rd}	Nm	23 791	28 755	33 861
Shearing resistance Q_{Rd}	kN	718	881	1 049
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	50	50	63.5
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	43	43	57.5

KSB® Anchor galvanized +epoxy

(with corrosion protection)

Anchor galvanized only, on demand

		galv. + epoxy on request	galv. + epoxy on request	galv. + epoxy on request
Item number				

SERVICE LOADS / APPLICATIONS

for piles

Service load $F_{yk}/1.75$ F	kN	629	800	971
------------------------------	----	-----	-----	-----

with nails in full composite

Service load $F_{yk}/1.75$ F	kN	629	800	971
------------------------------	----	-----	-----	-----

with prestressed anchor

Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	not suitable	not suitable	not suitable
--	----	--------------	--------------	--------------

Corresponds to B500B according to SIA 262

Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \times m / 7.850$ (kg/m³)

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

KSB® ITEM OVERVIEW T76

DRILL BITS

 T76/130 KSB® PIN DRILL BIT Ø 130 mm DC Weight/pcs. 3.80 kg Item No. 10-20 076 130 10	 T76/130 KSB® PIN DRILL BIT Ø 130 mm DC hard metal Weight/pcs. 4.60 kg Item No. 10-20 076 130 10-4	 T76/130 KSB® CROSS DRILL BIT Ø 130 mm Cast Weight/pcs. 2.90 kg Item No. 10-20 076 130 50	 T76/130 KSB® CROSS DRILL BIT Ø 130 mm JETTING, cast Weight/pcs. 2.70 kg excl. nozzles and copper ring Item No. 10-20 076 130 50-8
 T76/130 KSB® CROSS DRILL BIT Ø 130 mm Steel Weight/pcs. 2.70 kg Item No. 10-20 076 130 51	 T76/140 KSB® CLAY DRILL BIT Ø 140 mm Steel, blunt Weight/pcs. 3.30 kg welded, Type H, steel Item No. 10-20 076 140 49	 T76/170 KSB® PIN DRILL BIT Ø 170 mm DC Weight/pcs. 7.02 kg Item No. 10-20 076 170 10	 T76/170 KSB® CROSS DRILL BIT Ø 170 mm Cast Weight/pcs. 5.40 kg Item No. 10-20 076 170 50
 T76/170 KSB® CLAY DRILL BIT Ø 170 mm 76/180 JETTING, blunt Weight/pcs. 3.50 kg excl. nozzles and copper ring Item No. 10-20 076 180 49-8	 T76/170 KSB® CROSS DRILL BIT Ø 170 mm Cast Weight/pcs. 5.41 kg Item No. 10-20 076 180 50	 T76/170 KSB® PIN DRILL BIT Ø 170 mm Mushroom Weight/pcs. 6.14 kg Item No. 10-20 076 170 11	 T76/130 KSB® PIN DRILL BIT Ø 130 mm Mushroom Weight/pcs. 3.90 kg Item No. 10-20 076 130 11

SLEEVES

 T76 KSB® SLEEVE 200 x 90 mm Failure load 1000 kN Weight/pcs. 2.70 kg Item No. 10-30 076 1000 galvanized -1	 T76 KSB® SLEEVE 200 x 101 mm Failure load 2500 kN Weight/pcs. 5.64 kg Item No. 10-30 076 2500
--	--

Item number supplement
-1 = galvanized

SCREW NUTS



T76

KSB® SCREW NUT
Failure load 1 000kN
Weight/pcs. 1.62 kg

Item No. 10-70 076 1000
galvanized -1



T76

KSB® SCREW NUT
Failure load 1 500kN
Weight/pcs. 3.50 kg

Item No. 10-70 076 1500
galvanized -1



T76

KSB® SCREW NUT
Failure load 2500 kN
Weight/pcs. 3.50 kg

Item No. 10-70 076 2500



T76

KSB® DOMED ANCHOR NUT
Weight/pcs. 3.00 kg

Item No. 10-70 076 91

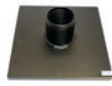
ANCHOR PLATES



T76

KSB® ANCHOR PLATES
250 x 250 x 25 mm
Weight/pcs. 12.50 kg

Item No. 10-60 076 250 25



T76

KSB® PILE-HEAD
200 x 200 x 25 mm
incl. welded sleeve
Weight/pcs. 8.00 kg

Item No. 10-60 076 250 25 90



T76

KSB® ANCHOR PLATES
250 x 250 x 30 mm
Weight/pcs. 13.50 kg

Item No. 10-60 076 250 30



T76

KSB® ANCHOR PLATES
300 x 300 x 30 mm
Weight/pcs. 21.60 kg

Item No. 10-60 076 300 30

ACCESSORIES

SPACER



T76

KSB® SPACER
Plastic

Item No. 10-40 076-2



T76

KSB® SPACER
Steel

Item No. 10-41 076-6

CLADDING TUBE



T76

KSB® ANCHOR CLADDING TUBE
PE 100 x 92/90 mm
Length 2 800 mm
Weight/pcs. 0.70 kg

Item No. 10-50076

KSB® ANCHOR T114

SPECIFICATIONS

■ weak
■ standard
□ strong
■ very strong

Anchor rod delivery lengths 1, 2, 3 or 4 meters
 The end of the item number indicates the length of the rod.
 Example 2 meter rod No. 10-10 032 22 20

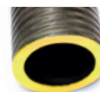
STANDARD B 500



*

**KSB® Anchor
T114/92**

900



**KSB® Anchor
T114/8T**



**KSB® Anchor
114/10T**

Item number		10-10 114 92 xx	10-10 114 08T xx	10-10 114 10T xx
Failure load F_{tk}	kN	2 050	2 800	3 450
Yield strength F_{yk}^3	kN	1 650	2 100	2 700
Tensile strength f_{tk}^3	N/mm ²	640	> 1 100	> 1 100
Yield point f_{yk}	N/mm ²	520	> 900	> 900
Nominal outer diameter ²	mm	114	114	114
Wall thickness	mm	10	8	10
Steel cross-section ¹ A	mm ²	3 280	2 670	3 280
Elongation after fracture A_{gt}	%	> 5.0	< 5.0	< 5.0
Ratio f_t / f_y		> 1.15	> 1.15	> 1.15
Weight G	kg/m	25.80	21	25.8
Thread direction		right	right	right
Max. test load (0.9 F_{yk}) F_D	kN	1 485	1 890	2 430
Torsional resistance T_{Rd}	Nm	48 578	69 874	84 077
Shearing resistance Q_{Rd}	kN	938	1 321	1 623
Equivalent to approx. threaded KÜBOLT® B500 (Yield strenght)	mm	50	63.5	63.5
Equivalent to approx. threaded KÜBOLT® S670 (Yield strenght)	mm	43	63.5	63.5

KSB® Anchor galvanized +epoxy

(with corrosion protection)

Anchor galvanized only, on demand

galv. + epoxy
on request

galv. + epoxy
on request

galv. + epoxy
on request

Item number				
-------------	--	--	--	--

SERVICE LOADS / APPLICATIONS

for piles

Service load $F_{yk}/1.75$ F	kN	943	1 200	1 543
------------------------------	----	-----	-------	-------

with nails in full composite

Service load $F_{yk}/1.75$ F	kN	943	1 200	1 543
------------------------------	----	-----	-------	-------

with prestressed anchor

Defined force $\leq 0.6 \times F_{tk} / P_0$	kN	1 230	not suitable	not suitable
--	----	-------	--------------	--------------

Corresponds to B500B according to SIA 262

Values are subject to constant changes

Anchor rod delivery lengths 2, 3 or 4 meters

¹ Calculated from the nominal mass with $S_0 = 10^6 \text{ x m} / 7.850 \text{ (kg/m}^3\text{)}$

² Permissible deviation: -3 bis +9 (%)

³ Characteristic value (5% fractile)

* Delivery on request (o.r.)

KSB® ITEM OVERVIEW T114

DRILL BITS



T114

KSB® CLAY DRILL BIT
Steel, blunt

Weight/pcs. 1.38 kg

Item No. 10-20 108 180



T114/170

KSB® PIN DRILL BIT
DC hard metal

Weight/pcs. 7.11 kg

Item No. 10-20 114 170 10-4



T114/200

KSB® CROSS DRILL BIT
Jetting

Weight/pcs. 7.11 kg

Item No. 10-20 114 200 50-8

ANCHOR REDUCTION



T114/T76

KSB® BIT ADAPTER
T114 AG / T76 IG

Weight/pcs. 2.05 kg

Item No. 10-20 114 90 76

SLEEVES



T114

KSB® SLEEVE

Item No. 10-30 114

galvanized

-1

Item number supplement

-1 = galvanized

SCREW NUTS



T114

KSB® SCREW NUT

Weight/pcs. 3.50 kg

Item No. 10-70 114

ANCHOR PLATES

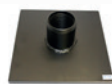


T114

KSB® ANCHOR PLATES
250 x 250 x 25 mm

Weight/pcs. 12.50 kg

Item No. 10-60 114 250 25



T114

KSB® ANCHOR PLATES
200 x 200 x 25 mm

Weight/pcs. 8.00 kg

Item No. 10-60 114 200 25



T114

KSB® ANCHOR PLATES
250 x 250 x 30 mm

Weight/pcs. 13.50 kg

Item No. 10-60 114 250 30



T114

KSB® ANCHOR PLATES
300 x 300 x 30 mm

Weight/pcs. 21.6 kg

Item No. 10-60 114 300 30

KSB® JETTING ACCESSORIES



KSB® NOZZLE JETTING
100 bar

Ø in mm	Item number
1.8	10-20 90 80 181
2.4	10-20 90 80 241
2.6	10-20 90 80 261
2.8	10-20 90 80 281



KSB® NOZZLE JETTING
ceramic insert

Ø in mm	Item number
1.8	10-20 90 80 181-4
2.4	10-20 90 80 241-4
2.6	10-20 90 80 261-4
2.8	10-20 90 80 281-4



KSB® COPPER RING
to nozzle

Item No. 10-20 90 80 282



KSB® SEAL
250 bar

Type	Item number
R32/15	10-30 90 80 032 15
R32/20	10-30 90 80 032 20
R32/T	10-30 90 80 032 T
R38/17	10-30 90 80 038 17
R38/T	10-30 90 80 038 T
R38/TS	10-30 90 80 038 TS
R51/28	10-30 90 80 051 28
R51/T	10-30 90 80 051 T
T76/55	10-30 90 80 076 55
T76/59	10-30 90 80 076 59
T76/63	10-30 90 80 076 63

KSB® FLUSHING HEADS



KSB® FLUSHING HEAD 80
EE-page

Type	Item number
R32/32	11-151 120-10
R38/32	11-151 120-11
T38/32	11-151 120-12
T45/32	11-151 120-13
H55/32	11-151 120-14
R32/R38	11-151 120-20
R38/R38	11-151 120-21
T38/R38	11-151 120-22
R45/R38	11-151 120-23
H55/R38	11-151 120-24
R51/R32	11-151 120-30
R51/R38	11-151 120-31
T38/R51	11-151 120-32
T45/R51	11-151 120-33
T45/R51	11-151 120-34
H55/H55	11-151 120-35
T51/R51	11-151 120-36



KSB® FLUSHING SHAFT 80
EE-page

Type	Item number
R32/32	11-151 122
R38/32	11-151 122-11
T38/32	11-151 122-12
T45/32	11-151 122-13
H55/32	11-151 122-14
R32/R38	11-151 122-20
R38/R38	11-151 122-21
T38/R38	11-151 122-22
R45/R38	11-151 122-23
H55/R38	11-151 122-24
R51/R38	11-151 122-29
R51/R32	11-151 122-30
R38/R51	11-151 122-31
T38/R51	11-151 122-32
T45/R51	11-151 122-33
H55/R51	11-151 122-34
H55/H55	11-151 122-35
T51/R51	11-151 122-36



KSB® FLUSHING HEAD
Ø 100 mm H64 L x ... compl.

Type	Item number
R51 IG	11-151 30
KS876 R IG	11-151 33



KSB® FLUSHING HEAD
Ø120 x ... x KSB76 R IG compl.

Type	Item number
H64 R IG	11-151 35
Gew. Rt70 R IG	11-151 36.1
Gew. H55 R	11-151 37



KSB® FLUSHING HEAD R32 IG
EE H.. x 108 compl.

H mm	Item number
22	11-1510 032-H22
25	11-1510 032-H25
R38 IG	
22	11-1510 038-H22



KSB® FLUSHING HEAD MOUN-
TING SUPPORT

Item No. 11-151 29



KSB® FLUSHING HEAD 80
SEAL KIT
(2x groove ring, 2x stripper)

Item No. 11-151 21



KSB® FLUSHING RING
Ø 80 mm incl. seals

Item No. 11-151 23

SETTING TOOLS



KSB® SPIGOT
S 22 x 108 mm

Type	Item number
R32	11-153 00
R25	11-153 01
R38	11-153 03



KSB® SAVER SUB
Ø 55 GL = 340 with SF-SW45

Type	Item number
R32 AG x R32 IG	11-151 80
R38 AG x R38 IG	11-151 81
R38 AG x R32 IG	11-151 82



KSB® TRANSITION SLEEVE

Type	Item number
R25-R32	11-153 10
R-R32	11-153 11
R32-R38	11-153 12
R32-T38	11-153 13
T45-R32	11-153 14
R38-R25	11-153 15
R45 IG-R25 IG	11-153 16
R32-30/11	11-153 17
R38-40/16	11-153 18
R38-T38	11-153 22
R51-R38	11-153 23
T45-R38	11-153 25
T45-R51	11-153 26



KSB® TRANSITION ADAPTER

Type	Item number
R32 IG-R25 AG	11-153 46
T38 IG-R38 AG	11-153 48
T38 IG-R32 AG	11-153 49
R38 IG-R32 AG	11-153 50
R32 IG-R38 AG	11-153 51
R32 IG-R32 AG	11-153 52
R32 IG-T38 AG	11-153 53
T45 IG-T38 AG	11-153 54
T45 IG-R32 AG	11-153 55
R38 IG-R51 AG	11-153 57
R32 IG-R51 AG	11-153 58
R51 IG-R32 AG	11-153 59
R51 IG-R38 AG	11-153 60
R38 IG-T38 AG	11-153 61
T76 IG-T45 AG	11-153 63
T38 IG-T45 AG	11-153 64
T45 IG-R25 AG	11-153 65
T45 IG-R32 AG	11-153 66
T45 IG-R38 AG	11-153 67
R51 IG-30/11 AG	11-153 68



KSB® INJECTION ADAPTER
.../1" AG

Type	Item number
R32	11-159 00
R38	11-159 10
R51	11-159 20



KSB® SUPPORT DRILL ADAPTER

Type	Item number
R32/60 mm	11-160 00
R32/76 mm	11-160 01
R38/76 mm	11-160 11
R38/88.9 mm	11-160 12



KSB® IMPACT RING KEY

Ø in mm	Item number
46	11-100 095
50	11-100 096
55	11-100 097
75	11-100 098



KSB® SUPPORT DRILL ADAPTER
SHORT

Type	Item number
R32/60 mm	11-160 00-1
R38/76 mm	11-160 11-1



PIPE WRENCH
AMERICAN MODEL
24"

Type No. 11-227 A24

ANCHOR DATA DESIGNATION

FORCES	F	Tensile force in the anchor
	F_{sk}	characteristic value of the tensile force at the yield point of the tension member
	F_{tk}	characteristic value of the tensile strength of the tension member
	F_{pv}	Test load at anchor tests
	F_p	Test load at tensile tests
	F_a	Initial force at anchor tests and tensile tests
	F_o	Defined force
	ΔF	Force increments at anchor tests - tensile tests (force levels)
	V_{rk}	characteristic value of the shear force at the yield point of the tension member
	M_{rk}	characteristic value of the bending moment at the yield point of the tension member
RESISTANCES	R_i	inner load bearing resistance of the anchor (force at the yield point F_{yk})
	R_a	outer load bearing resistance of the anchor (max. force of the embedding in the base)
	R	standard load bearing resistance of the anchor (smaller value of R_i and R_a)
	R_d	Load bearing resistance
RATED VALUES	S_d	Load (general)
	F_d	acting tensile force
	V_d	acting shear force
	M_d	acting bending moment
GEOMETRIC DESIGNATIONS	l	Anchor length
	l_f	effective free anchor length
	l_{fr}	free anchor length tensile test (incl. tension member extension)
	l_v	Anchorage length
	β	Anchor inclination with regard to the horizontal ($\beta > 0$: anchor declining)
CHARACTERISTIC VALUES	f_{tk}	Test value of the tensile strength of the tension member (N/mm ²)
	F_y	Calculated value of the yield point of the tension member (N/mm ²)
	f_{yk}	Test value at the yield point of the tension member
	E	Tension member modulus of elasticity (kN/mm ²)
	A	Cross-sectional area of the tension member (mm ²)
	k	Creep rate
SHIFTS	ΔI	Load (general)
	ΔI_i	acting tensile force
	ΔI_{el}	acting shear force
	ΔI_{bl}	acting bending moment

TECHNICAL TERMS

Anchor	Structural element that transfers force into the subsoil via a tension member
Injection pile	Pile that is injected with mortar or cement as it is being established or after it has been established
Measuring anchor /control anchor	Anchor that is equipped with a force measuring device
Nail	Anchor that primarily transfers tensile forces or tensile and shear forces in the subsoil
Pile	Streamlined structural element to transmit loads and forces into the subsoil
Non-tensioned anchor	Anchor that primarily transmits tensile forces into the subsoil
Anchoring	The entire combination of anchoring measures that contribute to the load bearing capacity of the structure by introducing tensile forces in the subsoil.
Test anchor/Test pile	Anchor and piles on which loading tests are performed for assessment
Pre-tensioned anchor	Anchor which transmits size defined tensile forces into the subsoil via a tension member
Tension member	Part of the anchor that transmits the anchor force from the anchor head to the anchorage zone