

SKR - SKS

Screw anchor for concrete

Carbon steel with white galvanic zinc coating



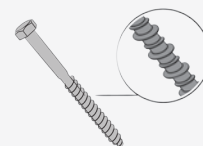
FAST INSTALLATION

Cement screws for simple and fast assembly



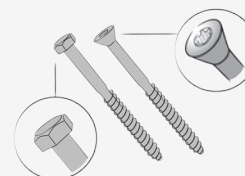
SPECIAL THREADING

Special thread for dry fastening without creating expansion stresses in the concrete



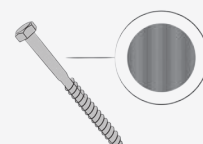
LARGER HEAD

Larger head for stronger and safer fastening of the wood



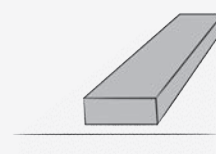
ECO-FRIENDLY

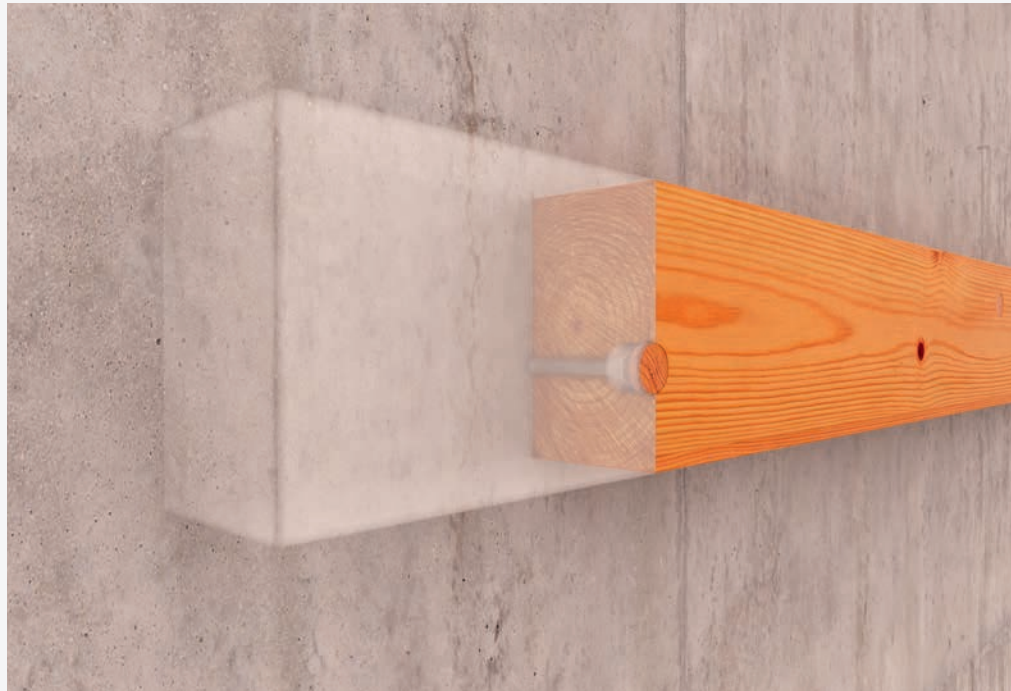
Trivalent Cr^{3+} chrome coating, replacing hexavalent chrome Cr^6



FIELDS OF USE

Fastening of wood or steel elements to concrete supports Service classes 1 and 2





DRY FASTENING

The special thread allows for fast installation of wood or steel elements on concrete supports with a simple screwdriver and a small pre-bored hole



FAST AND STRONG FASTENING

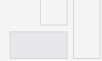
Versions with countersunk and hexagonal heads: the larger size of the head guarantees better shear resistance in fastening wood elements



REDUCED MINIMUM DISTANCES

Fastening on reinforced concrete occurs without the creation of any expansion stresses in the concrete and allows for reduced minimum distances

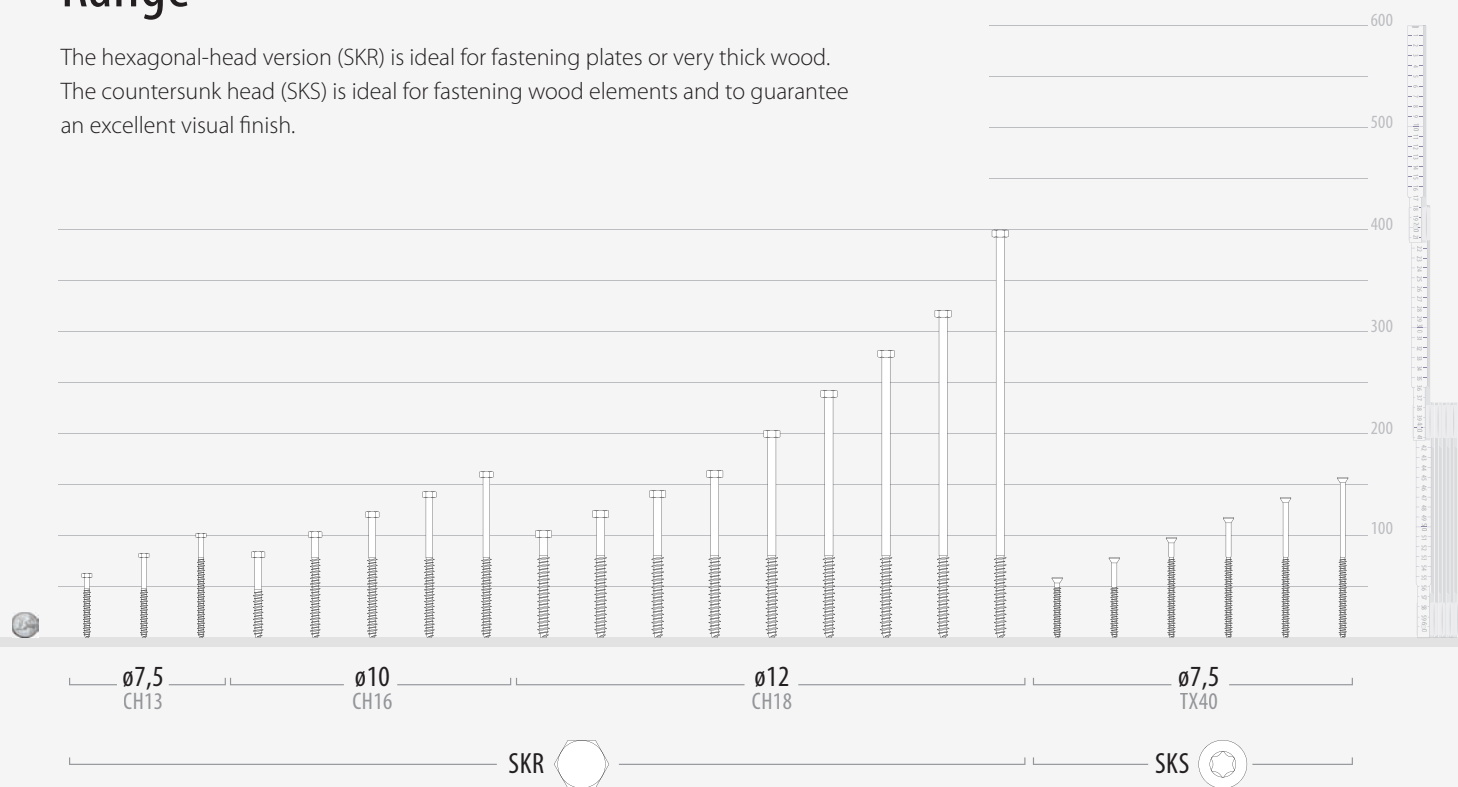
Applications

-  Shear angular TITAN fastening on concrete
-  Fastening of insulation on a cement support using a counter batten
-  Fastening of pillar base to the ground

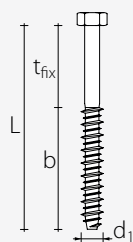


Range

The hexagonal-head version (SKR) is ideal for fastening plates or very thick wood. The countersunk head (SKS) is ideal for fastening wood elements and to guarantee an excellent visual finish.



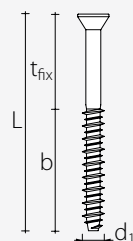
Codes and dimensions SKR



d ₁ [mm]	code	L [mm]	b [mm]	t _{fix} [mm]	pcs/pkg
7,5 CH13	SKR7560	60	50	10	100
	SKR7580	80	50	30	50
	SKR75100	100	80	20	
10 CH16	SKR1080	80	50	30	50
	SKR10100	100	80	20	25
	SKR10120	120	80	40	
	SKR10140	140	80	60	
	SKR10160	160	80	80	
12 CH18	SKR12100	100	80	20	25
	SKR12120	120	80	40	
	SKR12140	140	80	60	
	SKR12160	160	80	80	
	SKR12200	200	80	120	
	SKR12240	240	80	160	
	SKR12280	280	80	200	
	SKR12320	320	80	240	
	SKR12400	400	80	320	

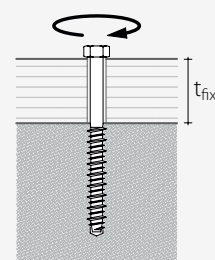
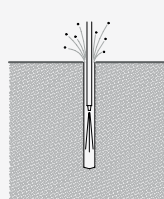
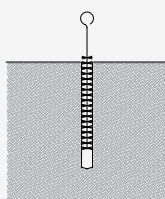
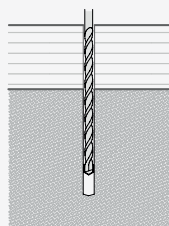
NOTE: An alternative product with the CE mark is available upon request

Codes and dimensions SKS

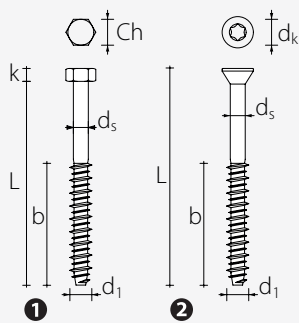


d ₁ [mm]	code	L [mm]	b [mm]	t _{fix} [mm]	pcs/pkg
7,5 TX40	SKS7560	60	50	10	100
	SKS7580	80	50	30	50
	SKS75100	100	80	20	
	SKS75120	120	80	40	
	SKS75140	140	80	60	
	SKS75160	160	80	80	

Installation



Geometry



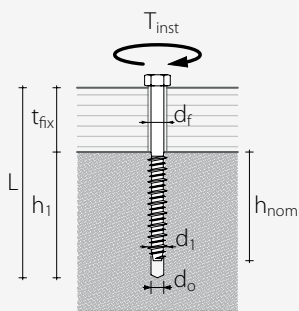
ANCHORS	Type	① SKR			② SKS
Nominal diameter	d_1 [mm]	7,5	10	12	7,5
Wrench	Ch [mm]	13	16	18	-
Head thickness	k [mm]	5,5	7,0	8,0	-
Head diameter	d_k [mm]	-	-	-	13,4
Shank diameter	d_s [mm]	5,7	7,7	9,4	5,7
Characteristic tensile strength *	$f_{u,k}$ [N/mm ²]	988	1068	1069	988

* Values in accordance with the certificate issued by Politecnico di Milano no. 2006/5205/1)

Installation

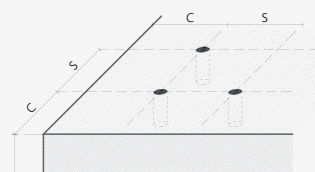
ANCHORS	Type	① SKR			② SKS
Nominal diameter	d_1 [mm]	7,5	10	12	6,0
Diameter of pre-bored hole in concrete	d_0 [mm]	6,0	8,0	10,0	8,0
Diameter of hole in element to be fastened - wood	d_f [mm]	8,0	10,0	12,0	-
Diameter of hole in element to be fastened - steel		8,0 - 10,0	10,0 - 12,0	12,0 - 14,0	-
Tightening torque	T_{inst} [mm]	15,0	25,0	50,0	-

Type	d_1 [mm]	L [mm]	t_{fx} [mm]	h_{nom} [mm]	h_1 [mm]
SKR	7,5	60	10	50	60
		80	30	50	60
		100	20	80	90
	10	80	30	50	65
		100	20	80	95
		120	40	80	95
		140	60	80	95
		160	80	80	95
	12	100	20	80	100
		120	40	80	100
		140	60	80	100
		160	80	80	100
		200	120	80	100
		240	160	80	100
		280	200	80	100
		320	240	80	100
		400	320	80	100
SKS	7,5	60	10	50	60
		80	30	50	60
		100	20	80	90
		120	40	80	90
		140	60	80	90
		160	80	80	90



KEY

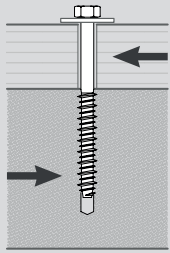
d_0 = Diameter of pre-bored hole in concrete
 h_1 = Hole depth
 h_{nom} = Nominal anchoring depth
 d_f = Diameter of hole in element to be fastened
 t_{fx} = Maximum fastening thickness
 T_{inst} = Tightening torque



KEY

h = Thickness of concrete support
 c = Distance from edge
 s = Centre Distance

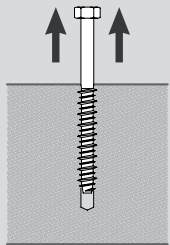
SHEAR RESISTANCE V - NON-CRACKED CONCRETE ⁽¹⁾



Anchor	Type	SKR			SKS
Nominal diameter	d₁ [mm]	7,5	10	12	7,5
Recommended resistance	V [kN]	2,50	6,65	8,18	2,50
Critical distance from edge	c _{cr,V} [mm]	70	110	130	70
Minimum distance from edge	c _{min,V} [mm]	50	60	70	50
Critical centre distance	s _{cr,V} [mm]	140	200	240	140
Minimum centre distance	s _{min,V} [mm]	50	60	70	50

⁽¹⁾ In evaluating the total resistance of the anchor, the shear resistance of the element to be fastened (e.g. wood, steel, etc.) should be evaluated according to the material used.

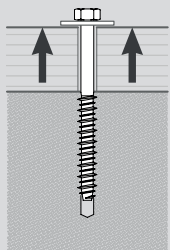
EXTRACTION RESISTANCE N - NON-CRACKED CONCRETE ⁽²⁾



Anchor	Type	SKR			SKS
Nominal diameter	d₁ [mm]	7,5	10	12	7,5
Recommended resistance	N [kN]	2,13	6,64	8,40	2,13
Critical distance from edge	c _{cr,N} [mm]	50	70	80	50
Minimum distance from edge	c _{min,N} [mm]	50	60	65	50
Critical centre distance	s _{cr,N} [mm]	100	150	180	100
Minimum centre distance	s _{min,N} [mm]	50	60	65	50
Minimum centre distance	s _{min,V} [mm]	50	60	70	50

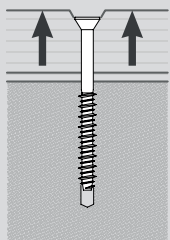
⁽²⁾ In evaluating the total resistance of the anchor, the axial resistance of the element to be fastened (e.g. wood, steel, etc.) should be evaluated according to the material used.

RESISTANCE TO HEAD PENETRATION N - WOOD ELEMENT TO BE FASTENED



Anchor	Type	SKR WITH WASHER DIN 9021		
Nominal diameter	d₁ [mm]	7,5	10	12
Recommended resistance	N [kN]	1,19	1,86	2,83

Anchor	Type	SKR WITH WASHER DIN 440		
Nominal diameter	d₁ [mm]	7,5	10	12
Recommended resistance	N [kN]	1,66	2,44	4,13



Anchor	Type	SKS
Nominal diameter	d₁ [mm]	7,5
Recommended resistance	N [kN]	0,72

NOTE

- The recommended extraction and shear values are in accordance with Certificate no. 2006/5205/1 issued by Politecnico di Milano.
- The recommended extraction and shear values derive from tests on C20/25 non-cracked concrete, without the influence of edge and/or centre-distance effects
- The recommended values for extraction and shear are obtained considering a safety coefficient of 4 on the ultimate load at failure.