Technical data sheet

ZYK / ZYKT
Zyklop

CYCLOPS ™ is a special connector that lets you connect sheet steel to wood components using an inclined plane fully threaded screw. The steel plate is imperative rectangular openings. Connection can be made on the side or end of the timber.

Features

Material

Steel quality:

S355 J2 G3

Corrosion protection:

Galvanizing thickness of approx. 12 micron

Benefits

- **With Cyclops ™ can shear load of steel sheet effectively transferred using rotating screws on the wooden elements.**
- **Fully threaded screw is placed obliquely**

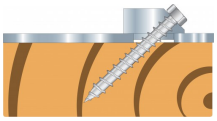
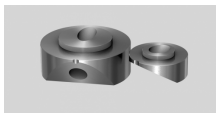
Applications

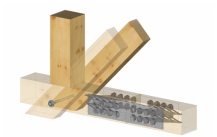
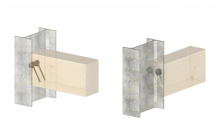
Header member

Wood, wood products, steel

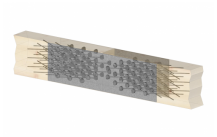
For Use With

- **The Cyclops ™ is a connector which allows you to connect a steel plate to a timber member by oblique Fully Threaded screw.**
- **In the steel plates rectangular holes are only necessary.**
- **The connection can be made on the side or end of the timber**



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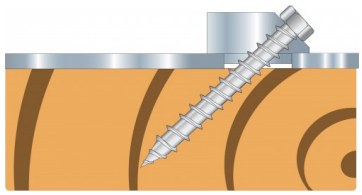
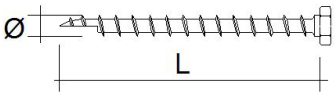
ZYK / ZYKT
Zyklop

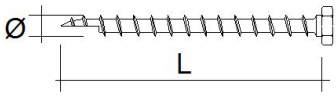
SIMPSON Strong-Tie

Technical Data

Dimensions





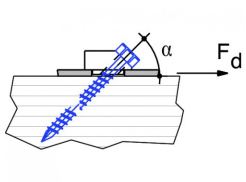


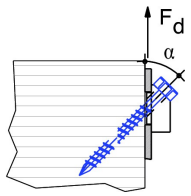
References	Dimensions and drill holes [mm]									Bohrhilfe Typ	Weight [kg]
	ZYKLOP^{TM} connector						SST screws		Min. plate thickness**		
	A	B	C	D	Slope α °	X*	Ø x L	Threaded length	t_{gr}		
ZYK10	32	20	11.5	1.9	30	16	6x200	192	3	BZYK6	0.098
ZYK11	25	16	10	1.9	45	11	6x200	192	6	BZYK6	0.07
ZYK12	20	12	7.5	1.9	60	8	6x200	192	10	BZYK6	0.043
ZYK40	45	27	14	2.9	30	23	8x300	290	5	BZYK8	0.24
ZYK41	30	20	12	2.9	45	14	8x300	290	8	BZYK8	0.14
ZYK42	25	16	9.5	2.5	60	10	8x300	290	9	BZYK8	0.1
ZYK70	50	30	16.5	3.4	30	26	10x400	388	5	BZYK10	0.38
ZYK71	35	24	15	3.4	45	16	10x400	388	8	BZYK10	0.23
ZYK72	30	20	11	2.9	60	11	10x400	388	12	BZYK10	0.56
ZYKT39	25	16	7.4	14	30	14	6x200	192	3	BZYK6	0.1
ZYKT69	30	20	7.5	14	30	17	8x300	290	4	BZYK8	0.12
ZYKT99	35	20	7.5	19	30	16	10x400	388	5	BZYK10	0.19

*length of pass

Boundaries of thickness t_{gr} **: max thickness of steel, up to this thickness, no adittional cut out in the line of screw is neccessary

Capacities: screws





References	$r_{ax,k,\alpha}$ [N/mm]		$R_{t,u,k}$ [kN]
	Timber side member	End grain	
ZYK10	62.1	81	12.5
ZYK11	81	81	12.5
ZYK12	81	62.1	12.5
ZYK40	66.9	87.2	23.5
ZYK41	87.2	87.2	23.5
ZYK42	87.2	66.9	23.5
ZYK70	88.2	115	33
ZYK71	115	115	33
ZYK72	115	88.2	33
ZYKT39	62.1	81	12.5
ZYKT69	66.9	87.2	23.5
ZYKT99	88.2	115	33

Capacities: ZYKLOP

References	ZYKLOP™ to timber side member				ZYKLOP™ to end grain			
	Max. capacities and corresponding steel thickness		Min. thickness with corresponding capacities		Max. capacities and corresponding steel thickness		Min. thickness with corresponding capacities	
	Max. $R_{k,ZYK}$ [kN]	Min. t_{st} [mm]	Min. t_{st} [mm]	$R_{k,ZYK}$ [kN]	Max. $R_{k,ZYK}$ [kN]	Min. t_{st} [mm]	Min. t_{st} [mm]	$R_{k,ZYK}$ [kN]
ZYK10	10.8	2	2	10.8	10.8	2	2	10.8
ZYK11	8.8	4	2	4.6	8.8	2	2	8.8
ZYK12	6.3	4.5	2	2.6	6.3	2	2	6.3
ZYK40	20.4	3	3	20.4	20.4	3	3	20.4
ZYK41	16.6	5.5	3	7.8	16.6	3	3	16.6
ZYK42	11.8	6.5	2.5	3.8	11.8	3.5	2.5	9
ZYK70	28.6	3.5	3.5	28.6	28.6	3.5	3.5	28.6
ZYK71	23.3	7	3.5	10.5	23.3	3.5	3.5	23.3
ZYK72	16.5	7.5	3	5.3	16.5	4	3	12.7
ZYKT39	10.8	2.5	1.5	7.7	10.8	1.5	1.5	10.8
ZYKT69	20.4	4	2	10.8	20.4	2	2	20.4
ZYKT99	28.6	5	2	13.4	28.6	2	2	28.6

*Max values $R_{k,ZYK}$
is valid also for larger thickness of steel. Interim values can be found by interplolatin.

Dimensioning:

The capacity for a connection with the Zyklop-connector shall be determine as following:

$$R_d = \min \begin{cases} R_{k,ZYK} \times n \times k_{mod}/\gamma_m \\ R_{ax,screw,d} \times \cos a \times n_{ef} \end{cases}$$

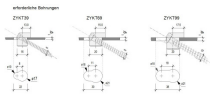
with

$$R_{ax,screw,d} = \min \begin{cases} r_{ax,k,\alpha} \times l_{ef} \times k_{mod}/\gamma_m \\ R_{t,u,k}/\gamma_m \end{cases}$$

It´s to check:

$$\frac{F_{i,d}}{R_{i,d}} \leq 1$$

Installation



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