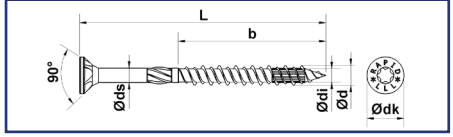
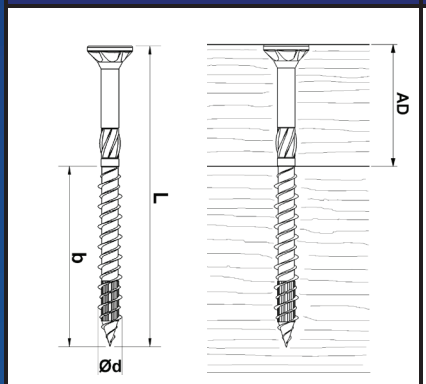
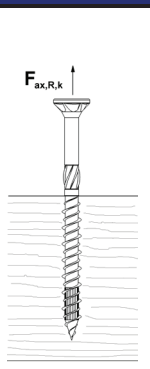
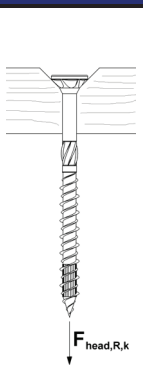
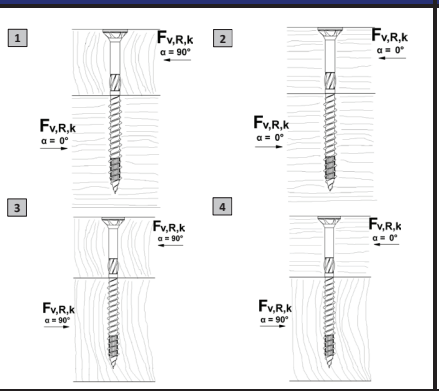
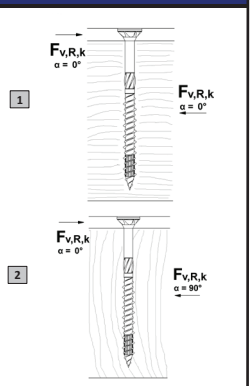
RAPID® Komprex
Countersunk head

schmid schrauben hainfeld

nominal diameter	d [mm]	8,0	10,0
head diameter	dk [mm]	15,0	18,5
core diameter	di [mm]	5,3	6,2
shaft diameter	ds [mm]	5,9	7,1
drive	TX	40	40
tensile load	$f_{tens,k}$ [kN]	23,3	35,0



dimensions				extraction resistance		head traction resistance		wood-wood shearing					steel-wood shearing		
															
d x L [mm]	b [mm]	AD [mm]	dk [mm]	zul. N_z [kN]	$F_{ax,R,k}$ [kN]	zul. $N_{z,Kopf}$ [kN]	$F_{head,R,k}$ [kN]	zul. N [kN] α=0°...90°	1. $F_{v,R,k}$ [kN] α_{AD}=90° α_{ET}=0°	2. $F_{v,R,k}$ [kN] α=0°	3. $F_{v,R,k}$ [kN] α=90°	4. $F_{v,R,k}$ [kN] α_{AD}=0° α_{ET}=90°	zul. N [kN] α=0°...90°	1. $F_{v,R,k}$ [kN] α=0°	2. $F_{v,R,k}$ [kN] α=90°
Ø 8,0															
8,0 x 80	50	30	15	2,00	4,36	1,13	2,79	0,96	3,07	3,65	2,91	3,42	1,36	6,12	5,23
8,0 x 90	60	30	15	2,40	5,23	1,13	2,79	0,96	3,07	3,65	2,91	3,42	1,36	6,33	5,45
8,0 x 100	60	40	15	2,40	5,23	1,13	2,79	1,09	3,44	4,22	3,26	3,90	1,36	6,33	5,45
8,0 x 120	80	40	15	3,20	6,98	1,13	2,79	1,09	3,44	4,22	3,26	3,90	1,36	6,77	5,89
8,0 x 140	80	60	15	3,20	6,98	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	6,77	5,89
8,0 x 160	80	80	15	3,20	6,98	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	6,77	5,89
8,0 x 180	100	80	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 200	100	100	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 220	100	120	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 240	100	140	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 260	100	160	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 280	100	180	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 300	100	200	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 320	100	220	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 340	100	240	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 360	100	260	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 380	100	280	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 400	100	300	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 420	100	320	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 440	100	340	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 460	100	360	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 480	100	380	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
8,0 x 500	100	400	15	4,00	8,72	1,13	2,79	1,09	3,90	4,25	3,63	3,90	1,36	7,21	6,32
Ø 10,0															
10,0 x 80	50	30	18,5	2,50	5,50	1,71	4,18	a)	a)	a)	a)	a)	2,13	8,15	6,91
10,0 x 100	60	40	18,5	3,00	6,60	1,71	4,18	1,60	4,50	5,49	4,27	5,14	2,13	8,43	7,18
10,0 x 120	80	40	18,5	4,00	8,80	1,71	4,18	1,60	4,50	5,49	4,27	5,14	2,13	8,98	7,73
10,0 x 140	80	60	18,5	4,00	8,80	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	8,98	7,73
10,0 x 160	100	60	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 180	100	80	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 200	100	100	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 220	100	120	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28

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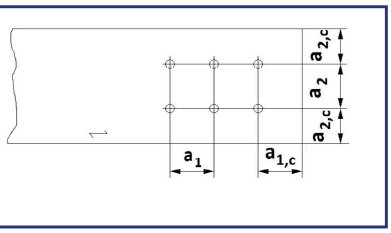
RAPID® Komprex
Countersunk head

schmid schrauben hainfeld

dimensions				extraction resistance		head traction resistance		wood-wood shearing					steel-wood shearing		
d x L [mm]	b [mm]	AD [mm]	dk [mm]	zul. N_z [kN]	$F_{ax,R,k}$ [kN]	zul. $N_{z,Kopf}$ [kN]	$F_{head,R,k}$ [kN]	zul. N [kN] α=0°...90°	1. $F_{v,R,k}$ [kN] α_{AD}=90° α_{ET}=0°	2. $F_{v,R,k}$ [kN] α=0°	3. $F_{v,R,k}$ [kN] α=90°	4. $F_{v,R,k}$ [kN] α_{AD}=0° α_{ET}=90°	zul. N [kN] α=0°...90°	1. $F_{v,R,k}$ [kN] α=0°	2. $F_{v,R,k}$ [kN] α=90°
Ø 10,0															
10,0 x 240	100	140	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 260	100	160	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 280	100	180	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 300	100	200	18,5	5,00	11,00	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	9,53	8,28
10,0 x 320	120	200	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 340	120	220	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 360	120	240	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 380	120	260	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 400	120	280	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 420	120	300	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 440	120	320	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 460	120	340	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 480	120	360	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83
10,0 x 500	120	380	18,5	6,00	13,20	1,71	4,18	1,70	5,33	5,84	4,96	5,33	2,13	10,08	8,83

minimum distances [b]	Ø 8,0	Ø10,0
a_1 [mm]	40,0	70,0
a_2 [mm]	40,0	50,0
$a_{1,c}$ [mm]	40,0	100,0
$a_{2,c}$ [mm]	32,0	40,0

Distance a_2 can be reduced to 2.5 x d if 25 x d^2 can be maintained for the product for the distances a_1 and a_2. Does not apply to d > 8 mm.



General definitions

a) ...For these measurements, there are no shearing distances for wood-wood connections, because the necessary thickness of fixture according to ETA 12/0373 Appendix 7 Table A6.9 is not reached. For steel-wood connections there is no stipulated minimum thickness of fixture.

b)...The minimum distances are specified according to ETA 12/0373 A.7.3 for axial load.

- The screw thread extraction values were calculated with an angle of 45° to 90° to the wood grain direction.
- Geometry and mechanical properties comply with ETA 12/0373.
- The specified values relate to wood with a gross density ρ_k = 350 kg/m³.
- The thickness of fixture (AD) was selected equal to the shaft length.
- All values were calculated using the length of the screw thread when completely screwed in.
- In the case of steel-wood connections, a steel sheet with a thickness t = d was taken as the basis of the calculation.
- Misprints and printing errors reserved.
- The specified values are planning aids. Projects are to be carried out only by authorised specialists.
- The design value of bearing capacity $F_{R,d}$ for the final form of the wood connection results from the characteristic values as follows:

$$F_{R,d} = \frac{F_{R,k} \cdot k_{mod}}{\gamma_m}$$

$F_{R,d}$ ...design value of bearing capacity on shearing and extraction per connection element
$F_{R,k}$ ...characteristic value of bearing capacity on shearing and extraction per connection element
γ_m, k_{mod} ...coefficients of corresponding national norms

Our technicians are always pleased to help you with any questions: info@schrauben.at

Difference - characteristic and permissible values

- Permissible values - load (grey columns):
  - Measurement according to **DIN 1052:1988** and according to German licences **Z-9.1-564**
- Characteristic values (blue columns):
  - Measurement according to **EC5** and **ETA 12/0373**

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