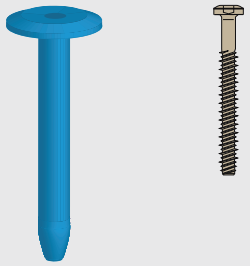
Combination table – selection of the correct fastener and sleeve combination

COMBINATION

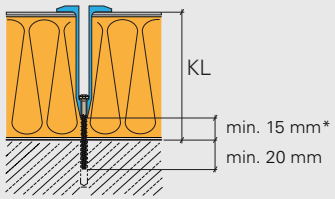


Sleeve:
R45

Fastener:
TI-T25-6,3

CALCULATION

Please follow the calculation steps to find the correct fastener and sleeve combination for new roofs. Special rules apply for renovation.



* thickness vapour barrier to be considered

Step 1: Calculation of clamping length KL

Clamping length KL:
Total roof build-up between top edge substrate and top edge membrane

KL = Thickness vapour barrier
+ Thickness insulation
+ Thickness membrane

Step 2: Calculation of sleeve length SL

$SL_{max.}$ = Clamping length KL
- Thickness vapour barrier
- 15 mm

If a length is not available, take the next shorter length. Sleeve range see chapter.

Step 3: Calculation of fastener length FL

$FL_{min.}$ = Clamping length KL
- Sleeve length SL
+ 35 mm

If a length is not available, take the next longer length. Fastener range see chapter.

Step 4: Calculation of setting depth Sd

Sd = sleeve length
+ Fastener length
- 15 mm
- Clamping length KL

Depth of pilot hole to be 15 mm deeper than the setting depth, depending on site conditions.

KL (mm)	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500
Sleeve length SL (mm)	15									105																								325														
			35										135									225														365												
						65										165									255															405								
								85										185										285																				485
Fastener length FL (mm)	50	60	70	80						50	60	70	80	90																				50	60	70	80	90	100											
			50	60	70	80	90						50	60	70	80	90					50	60	70	80	90											50	60	70	80	90	100							
						50	60	70	80							50	60	70	80						50	60	70	80	90												50	60	70	80	90	100	120	120	140
								50	60	70	80							50	60	70	80	90	100					50	60	70	80	90	100															50
Setting depth Sd (mm)	20	20	20	20						20	20	20	20	20																				20	20	20	20	20	20											
			20	20	20	20	20						20	20	20	20	20					20	20	20	20	20											20	20	20	20	20	20							
						20	20	20	20							20	20	20	20						20	20	20	20	20												20	20	20	20	20	20	30	20	30
								20	20	20	20							20	20	20	20	20	20					20	20	20	20	20	20															20