# Betsi®





## Betsi® Expansion Anchor

ETA 18/1141
Option 7

| SIHGA® Feature | YOUR Benefit |
|---|---|
| fastenings for wall beams, sills, steel brackets, support feet, etc. on non-cracked concrete from concrete quality C 20/25 | one expansion anchor for numerous application areas |
| developed for very high tensile and shear loads | saves time, costs and establishes long-lasting and highly durable connections |
| extra long lengths of up to 400 mm | enables the fastening of large wood cross-sections |
| easy to install | the full load-bearing capacity is attained through simply knocking in and tightening |
| simply read the load table incl. edge distances | provides assurance of the right anchor selection |
| enables even smaller edge and axial distances than those specified in the table values | for special applications, SIHGA® performs the calculation for you |
| includes installation instructions and Stabebo SDS drill with four-edged geometry specially for reinforced concrete | time-saving, practical, precise, complete accessories enclosed |
| stainless steel expansion clip | safety per ETA |

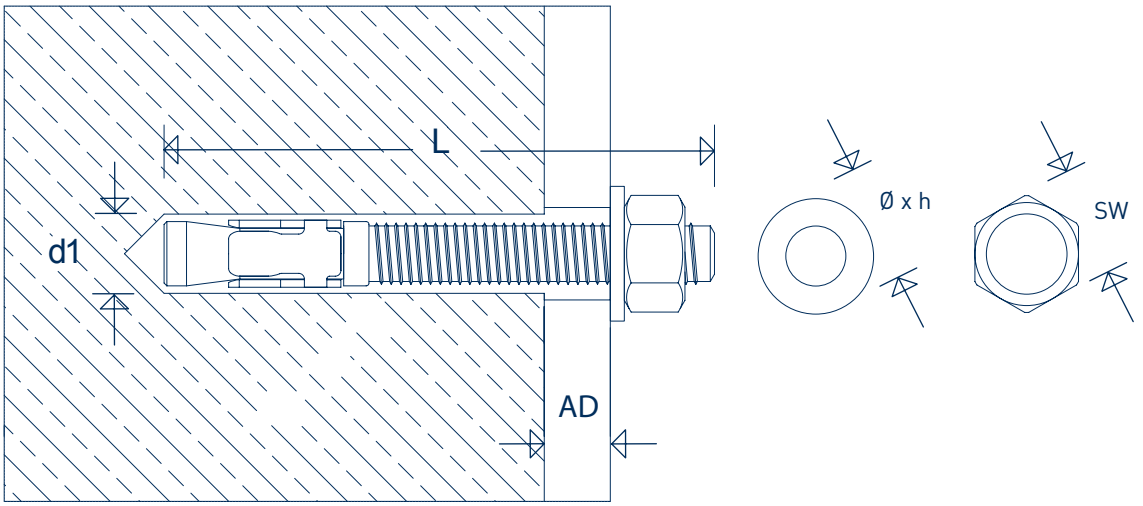




## SIHGA® TIP:

Ensure the correct drill diameter and drill quality, the Stabebo SDS Drill is therefore enclosed.

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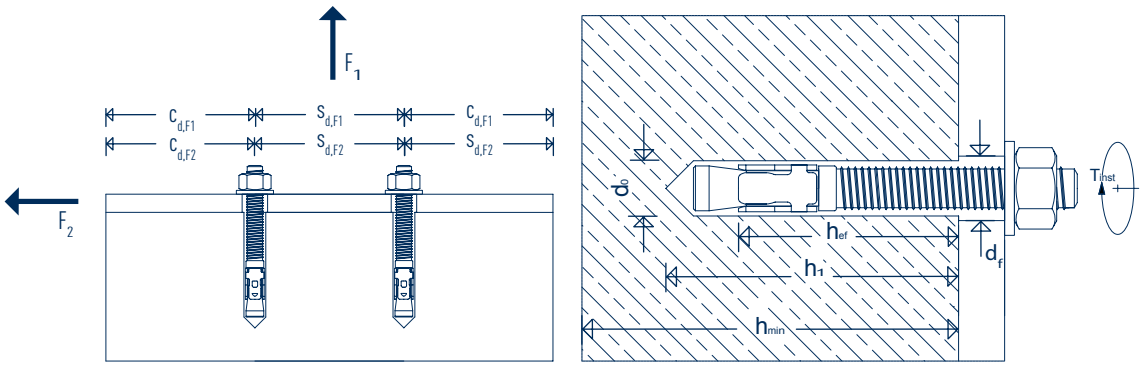



| SIHGA® montagepack | | Dimension Betsi® | Add-on Part AD = $t_{fix}$ | Width Across Flats SW | Washer ∅ x h |
|---|---|---|---|---|---|
| Art. No. | PU | d1 x L | [mm] | [mm] | [mm] |
| 25856 | 100 | 8,0 x 75 | 17 | 13 | 16 x 1,6 |
| 25416 | 50 | 10,0 x 90 | 25 | 17 | 20 x 2,0 |
| 25426 | 50 | 10,0 x 100 | 35 | 17 | 20 x 2,0 |
| 25436 | 50 | 10,0 x 120 | 55 | 17 | 20 x 2,0 |
| 25446 | 50 | 10,0 x 150 | 85 | 17 | 20 x 2,0 |
| 25456 | 50 | 10,0 x 170 | 105 | 17 | 20 x 2,0 |
| 25516 | 50 | 12,0 x 110 | 28 | 19 | 24 x 2,0 |
| 25526 | 50 | 12,0 x 120 | 38 | 19 | 24 x 2,0 |
| 25536 | 50 | 12,0 x 140 | 58 | 19 | 24 x 2,0 |
| 25546 | 50 | 12,0 x 160 | 78 | 19 | 24 x 2,0 |
| 25556 | 50 | 12,0 x 180 | 98 | 19 | 24 x 2,0 |
| 25606 | 50 | 12,0 x 200 | 118 | 19 | 36 x 2,5 |
| 25616 | 50 | 12,0 x 220 | 138 | 19 | 36 x 2,5 |
| 25626 | 50 | 12,0 x 240 | 158 | 19 | 36 x 2,5 |
| 25636 | 30 | 12,0 x 280 | 198 | 19 | 36 x 2,5 |
| 25646 | 30 | 12,0 x 300 | 218 | 19 | 36 x 2,5 |
| 25656 | 30 | 12,0 x 360 | 278 | 19 | 36 x 2,5 |
| 25706 | 20 | 16,0 x 240 | 125 | 24 | 48 x 3,0 |
| 25716 | 20 | 16,0 x 280 | 165 | 24 | 48 x 3,0 |
| 25726 | 15 | 16,0 x 300 | 185 | 24 | 48 x 3,0 |
| 25736 | 15 | 16,0 x 400 | 285 | 24 | 48 x 3,0 |

## SIHGA® TIP:

Obtain reliable anchoring results with the S3 design software.

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| SIHGA® | Betsi® | | M 8 | M 10 | M 12 | M 16 |
|---|---|---|---|---|---|---|
| effective anchoring depth | $h_{ef}$ | [mm] | 45 | 50 | 60 | 85 |
| concrete drilling diameter | $d_o$ | [mm] | 8 | 10 | 12 | 16 |
| attachment drilling diameter | $d_f$ | [mm] | 10 | 12 | 14 | 18 |
| borehole depth | $h_1$ | [mm] | 60 | 65 | 80 | 110 |
| min. concrete thickness | $h_{min}$ | [mm] | 100 | 100 | 120 | 170 |
| max. tightening torque | $T_{inst}$ | [Nm] | 20 | 35 | 55 | 100 |
| minimum edge spacing without load influence | $C_{min}$ | [mm] | 61 | 68 | 81 | 115 |
| maximum axial distance without load influence | $S_{min}$ | [mm] | 61 | 68 | 81 | 115 |
| **recommended tensile strength per anchor without edge influence,at edge spacing c ≥ 1.2 x $c_{cr.sp\ (lt.\ ETA)}$ recommended centre distance s ≥ 3 x $h_{ef}$*** | | | | | | |
| in non-cracked concrete min C 20/25 | $F_1$ | [kN] | 5.0* | 6.7* | 8.9* | 8.9* |
| recommended edge distance | $C_{d.F1}$ | [mm] | 136 | 150 | 180 | 256 |
| recommended centre distance | $S_{d.F1}$ | [mm] | 135 | 150 | 180 | 255 |
| **recommended shear resistance per anchor without edge influence, with edge spacing c ≥ 60 x d and centre distance s ≥ 3 x $h_{ef}$** | | | | | | |
| in non-cracked concrete min C 20/25 | $F_2$ | [kN] | 7.4* | 11.6* | 16.9* | 31.4* |
| recommended edge distance | $C_{d.F2}$ | [mm] | 480 | 600 | 720 | 960 |
| recommended centre distance | $S_{d.F2}$ | [mm] | 135 | 150 | 180 | 255 |

* for systems with high installation safety $\gamma_2$ = 1.0
ETAG 0001 2010 Annex C - Design method for Anchoring in concrete / safety concept 3.2.3.1 and 3.2.3.2
recommended loads of a single anchor in concrete C 20/25, normal reinforced in compliance with the specified AD and edge distances

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