

EPCON™ G5 PRO

REBAR APPLICATION

Performance data from European Technical Assessment ETA-18/0675

HIGH STRENGTH EPOXY

The data given in the RAMSET CC Method have to be applied (refer to pages 4 to 5)



Rebar Diameter	8	10	12	16	20	25	32
Drilling ø (mm)	12	14	16	20	25	30	40
Drilling depth (mm)	80	100	120	160	200	250	320
Consumption per hole (ml)	5.0	6.6	10.7	21.6	45.9	81.6	193.4
EPCON G5 Pro (600ml)	120.6	82.3	46.7	21.7	11.1	6.2	2.7

CHARACTERISTIC LOADS (N_{Rk} , V_{Rk}) in kN

Characteristic loads are statistically determined from ETA-18/0675 & EN 1992-4 in admissible service conditions

.Tension resistance based on minimum of rebar tensile resistance, concrete cone resistance, combined pullout & concrete resistance

.Shear resistance based on minimum of rebar shear resistance, concrete pry-out resistance

- Input material : + Concrete grade : C20/25 (Uncracked concrete)
- + Rebar grade : CB 300-V
- + No edge distance

TENSILE							
Rebar Size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
h_{ef} (mm)	80	100	120	160	200	250	320
N_{Rk} (kN)	22.6	35.3	50.9	68.7	109.1	149.7	225.2

SHEAR							
Rebar Size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
V_{Rk} (kN)	13.6	21.2	30.5	54.3	84.8	132.5	217.1

DESIGN LOADS (N_{Rd} , V_{Rd}) FOR ONE ANCHOR WITHOUT EDGE OR SPACING INFLUENCE IN kN

$$N_{Rd} = \frac{N_{Rk}^*}{\gamma_M}$$

$$V_{Rd} = \frac{V_{Rk}^*}{\gamma_M}$$

TENSILE							
Rebar Size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
h_{ef} (mm)	80	100	120	160	200	250	320
N_{Rd} (kN)	12.6	19.6	28.3	45.8	72.7	99.8	150.1

SHEAR							
Rebar Size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
V_{Rd} (kN)	9.0	14.1	20.3	36.2	56.5	88.3	144.7

γ_M refer to tensile safety factor page 4

γ_M refer to safety factor for shear page 4

RECOMMENDED LOADS (N_{Rec} , V_{Rec}) FOR ONE ANCHOR WITHOUT EDGE OR SPACING INFLUENCE IN kN

$$N_{Rec} = \frac{N_{Rk}^*}{\gamma_M \times \gamma_F}$$

$$V_{Rec} = \frac{V_{Rk}^*}{\gamma_M \times \gamma_F}$$

TENSILE							
Rebar Size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
h_{ef} (mm)	80	100	120	160	200	250	320
N_{Rec} (kN)	9.0	14.0	20.2	32.7	51.9	71.2	107.2

SHEAR							
Rebar Size	Ø8	Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
V_{Rec} (kN)	6.4	10.1	14.5	25.9	40.4	63.1	103.4

$\gamma_F = 1.4$

$\gamma_F = 1.4$

EPCON™ G5 PRO

CHEMSET ANCHOR STUD

HIGH STRENGTH EPOXY

The data given in the RAMSET CC Method have to be applied (refer to pages 4 to 5)

Stud diameter	8	10	12	16	20	24	30
Drilling ø (mm)	10	12	14	18	25	28	35
Drilling depth (mm)	80	90	110	125	170	210	280
Consumption per hole (ml)	3.5	5.6	9.3	17.5	45.9	71.1	148.1
EPCON G5 Pro (600ml)	173.7	107.2	64.5	34.3	13.1	8.4	4.1



CHARACTERISTIC LOADS (N_{Rk} , V_{Rk}) in kN

Characteristic loads are statistically determined from ETA-18/0675 & EN 1992-4 in admissible service conditions

.Tension resistance based on minimum of stud tensile resistance, concrete cone resistance, combined pullout & concrete resistance

.Shear resistance based on minimum of stud shear resistance, concrete pry-out resistance

- Input material: + Chemset anchor stud 5.8
 + Concrete grade C20/25 (Uncracked concrete)
 + No edge distance

TENSILE							
Anchor size	M8	M10	M12	M16	M20	M24	M30
h_{ef} (mm)	80	90	110	125	170	210	280
N_{Rk} (kN)	18	29	42	68.7	109.1	149.7	230.6

SHEAR							
Anchor size	M8	M10	M12	M16	M20	M24	M30
V_{Rk} (kN)	9.0	15.0	21.0	39.0	61.0	88.0	140.0

DESIGN LOADS (N_{Rd} , V_{Rd}) FOR ONE ANCHOR WITHOUT EDGE OR SPACING INFLUENCE IN kN

$$N_{Rd} = \frac{N_{Rk}^*}{\gamma_{Mc}}$$

$$V_{Rd} = \frac{V_{Rk}^*}{\gamma_{Ms}}$$

TENSILE							
Anchor size	M8	M10	M12	M16	M20	M24	M30
h_{ef} (mm)	80	90	110	125	170	210	280
N_{Rd} (kN)	12.0	19.3	28.0	45.8	72.7	99.8	153.7

SHEAR							
Anchor size	M8	M10	M12	M16	M20	M24	M30
V_{Rd} (kN)	7.2	12.0	16.8	31.2	48.8	70.4	112.0

$\gamma_{Ms} = 1.25$

γ_{Mc} refer to tensile safety factor page 4

RECOMMENDED LOADS (N_{Rec} , V_{Rec}) FOR ONE ANCHOR WITHOUT EDGE OR SPACING INFLUENCE IN kN

$$N_{Rec} = \frac{N_{Rk}^*}{\gamma_{Mc} \times \gamma_F}$$

$$V_{Rec} = \frac{V_{Rk}^*}{\gamma_{Ms} \times \gamma_F}$$

TENSILE							
Anchor size	M8	M10	M12	M16	M20	M24	M30
h_{ef} (mm)	80	90	110	125	170	210	280
N_{Rec} (kN)	8.6	13.8	20.0	32.7	51.9	71.3	109.8

SHEAR							
Anchor size	M8	M10	M12	M16	M20	M24	M30
V_{Rec} (kN)	5.1	8.6	12.0	22.3	34.9	50.3	80.0

$\gamma_F = 1.4$

$\gamma_F = 1.4$

* Derived from test result assessed in ETA 18/0675

ANCHOR TECHNOLOGY

ChemSet™ Anchor Studs - Zinc Plated



Part No.	Description	Anchor Size (mm)	Stud Length (mm)	Max Fixture Thickness (mm)	Hole Diameter Ø (mm)	Min Hole Depth (mm)	Order Qty
8A-CS08-110V	CS08110 Studs	8	110	15	10	80	10
8A-CS10-130V	CS10130 Studs	10	130	20	12	90	10
8A-CS12-160V	CS12160 Studs	12	160	25	14	110	10
8A-CS16-190V	CS16190 Studs	16	190	35	18	125	10
8A-CS20-260V	CS20260 Studs	20	260	65	25	170	6
8A-CS24-300V	CS24300 Studs	24	300	63	28	210	6
8A-CS30-380V	CS30380 Studs	30	380	70	35	280	5

ChemSet™ Anchor Studs - Stainless Steel SUS316



Part No.	Description	Anchor Size (mm)	Stud Length (mm)	Max Fixture Thickness (mm)	Hole Diameter Ø (mm)	Min Hole Depth (mm)	Order Qty
7D-CS08-110S-S	CS08110SS Studs	8	110	15	10	80	10
7D-CS10-130S-S	CS10130SS Studs	10	130	20	12	90	10
7D-CS12-160S-S	CS12160SS Studs	12	160	25	14	110	10
7D-CS16-190S-S	CS16190SS Studs	16	190	35	18	125	10
7D-CS20-260S-S	CS20260SS Studs	20	260	65	25	170	6
7D-CS24-300S-S	CS24300SS Studs	24	300	63	28	210	6
7D-CS30-380S-S	CS30380SS Studs	30	380	70	35	280	5

ChemSet™ Anchor Studs - Hot Dipped Galvanised



Part No.	Description	Anchor Size (mm)	Stud Length (mm)	Max Fixture Thickness (mm)	Hole Diameter Ø (mm)	Min Hole Depth (mm)	Order Qty
8A-CS08-110H-DG	CS08110GH Studs	8	110	15	10	80	10
8A-CS10-130H-DG	CS10130GH Studs	10	130	20	12	90	10
8A-CS12-160H-DG	CS12160GH Studs	12	160	25	14	110	10
8A-CS16-190H-DG	CS16190GH Studs	16	190	35	18	125	10
8A-CS20-260H-DG	CS20260GH Studs	20	260	65	25	170	6
8A-CS24-300H-DG	CS24300GH Studs	24	300	63	28	210	6