CE	DECLARATION OF PERFORMANCE According to Construction Product Regulation n° 305/2011
	DoP N°16/0035

1. Unique identification code of the product-type:

DIAGER V PRO+, DIAGER V WINTER and DIAGER V TROPICAL

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

CODE	ITEM	BARCODE
F353000V	V Pro +	3336600186224
F354000V	V Pro +	3336600186231
F354000W	V WINTER	3336600186286
F354000T	V TROPICAL	3336600186293

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Generic type and use		Bonded anchor for anchorage of threaded rod.					
Size covered		M8	M10	M12	M16	M20	M24
hef [mm]	min	60	70	80	100	120	145
	max	160	200	240	320	400	480
Base material and strength class		Reinforced or unreinforced normal weight concrete of strength class C20/25 at minimum to C50/60 at maximum according to EN 206-1.					
Base material condition		Non-cracked concrete from M8 to M24, Cracked concrete from M10 to M20					
Anchor metal material and corresponding environmental exposure		Threaded rods: a) Carbon galvanized steel class from 4.8 to 12.9 according to EN ISO 898-1 for dry internal conditions. b) Stainless steel A4-70 and A4-80 according to EN ISO 3506 for dry internal conditions, external atmospheric exposure (including industrial and marine environment) or exposure in permanently damp internal conditions if no particular aggressive conditions exist. High resistant corrosion stainless steel class 70 according to EN ISO 3506 for all conditions.					
		Nuts and washers: Corresponding to anchor rod material above mentioned for the different environmental exposures.					
Type of loading		Static or quasi-static loading.					
Service temperature range		a) -40°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C), b) -40°C to +80°C (max. short term temperature +80°C and max. long term temperature +50°C), c) -40°C to +120°C (max. short term temperature +120°C and max. long term temperature +72°C).					
Use category		Category 1 and 2: dry and wet concrete and flooded hole. Overhead installation is allowed. Perforation with hammer drilling machine.					

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

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5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):
Not applicable

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:
System 1

7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:
Not applicable

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:
ITB issued ETA-16/0035 on the basis of ETAG 001 part 5. ITB (n°1488) performed: the determination of the product type on the basis of type testing (including sampling), type calculation, tabulated values or descriptive documentation of the product; the initial inspection of the factory and of the factory production control; the continuous surveillance; assessment and approval of the factory production control; under system 1 and issue the certificate of conformity n°1488-CPR-0541/W.

9. Declared performance:

HARMONIZED TECHNICAL SPECIFICATION: ETAG 001 PART 5						
ESSENTIAL CHARACTERISTICS	PERFORMANCE ACCORDING TO ETA-16/0035					
Installation parameters	M8	M10	M12	M16	M20	M24
d [mm]	8	10	12	16	20	24
d_0 [mm]	10	12	14	18	24	28
d_{fix} [mm]	9	12	14	18	22	26
h_1 [mm]	h_{ef} + 5 mm					
h_{min} [mm]	MAX { h_{ef} + 30 mm; ≥ 100 mm; h_{ef} + 2d_0 }					
T_{inst} [Nm]	10	20	40	80	130	200
t_{fix} [mm]	from 0 mm to 1500 mm					
S_{min} and C_{min} [mm]	40	40	40	50	60	80
γ_2 [-] Category 1	1,00					
γ_2 [-] Category 2	1,20					
Resistance for tensile load Resistance for combined pullout and concrete cone failure	M8	M10	M12	M16	M20	M24
$\tau_{Rk,ucr}$ [N/mm²] concrete C20/25 Temperature range -40°C/+40°C (T_{mlp} = 24°C)	16,0	12,0	12,0	12,0	9,5	9,5
$\tau_{Rk,ucr}$ [N/mm²] concrete C20/25 Temperature range -40°C/+80°C (T_{mlp} = 50°C)	11,0	8,5	8,5	8,5	7,0	7,0
$\tau_{Rk,ucr}$ [N/mm²] concrete C20/25 Temperature range -40°C/+120°C (T_{mlp} = 72°C)	6,0	4,5	4,5	4,5	4,0	4,0
$\tau_{Rk,cr}$ [N/mm²] cracked concrete C20/25 Temperature range -40°C/+40°C (T_{mlp} = 24°C)	-	9,0	9,0	9,0	6,5	-
$\tau_{Rk,cr}$ [N/mm²] cracked concrete C20/25 Temperature range -40°C/+80°C (T_{mlp} = 50°C)	-	6,5	6,5	6,5	4,5	-
$\tau_{Rk,cr}$ [N/mm²] cracked concrete C20/25 Temperature range -40°C/+120°C (T_{mlp} = 72°C)	-	3,5	3,5	3,5	2,5	-
$\psi_{c,uc/ucr}$ C30/37 [-]	1,12					
$\psi_{c,uc/ucr}$ C40/50 [-]	1,23					
$\psi_{c,uc/ucr}$ C50/60 [-]	1,30					

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HARMONIZED TECHNICAL SPECIFICATION: ETAG 001 PART 5							
ESSENTIAL CHARACTERISTICS		PERFORMANCE ACCORDING TO ETA-16/0035					
Resistance for tensile load Resistance for splitting failure		M8	M10	M12	M16	M20	M24
$C_{cr,sp}$ [mm]	if $h = h_{min}$	2,5 h_{ef}		2,0 h_{ef}		1,5 h_{ef}	
	if $h_{min} < h < 2\ h_{min}$	Interpolated value					
	if $h \geq 2\ h_{min}$	$C_{cr,Np}$					
$S_{cr,sp}$ [mm]		2,0 $C_{cr,sp}$					
Resistance for shear load Resistance for concrete pry-out failure		M8	M10	M12	M16	M20	M24
k [-]		2,0					
Displacement under service load Tensile load		M8	M10	M12	M16	M20	M24
F_{unc} [kN] for concrete from C20/25 to C50/60		9,6	10,8	14,3	23,8	29,6	42,4
$\delta_{0,unc}$ [mm]		0,30	0,30	0,35	0,35	0,35	0,40
$\delta_{\infty,unc}$ [mm]		0,85					
F_{cr} [kN] for concrete from C20/25 to C50/60		-	9,5	14,3	21,4	23,8	-
$\delta_{0,cr}$ [mm]		-	0,50	0,50	0,70	0,60	-
$\delta_{\infty,cr}$ [mm]		0,85					
Displacement under service load Shear load		M8	M10	M12	M16	M20	M24
$F_{unc/cr}$ [kN] for concrete from C20/25 to C50/60		3,7	5,8	8,4	15,7	24,5	35,3
$\delta_{0,unc/cr}$ [mm]		2,00					
$\delta_{\infty,unc/cr}$ [mm]		3,00					

HARMONIZED TECHNICAL SPECIFICATION: ETAG 001 PART 1 PARAGRAPH 5.2.1	
ESSENTIAL CHARACTERISTICS	PERFORMANCE
Reaction to fire	In the final application the thickness of the mortar layer is about 1 to 2 mm and most of the mortar is material classified class A1 according to EC Decision 96/603/EC. Therefore it may be assumed that the bonding material (synthetic mortar or a mixture of synthetic mortar and cementitious mortar) in connection with the metal anchor in the end use application do not make any contribution to fire growth or to the fully developed fire and they have no influence to the smoke hazard.

HARMONIZED TECHNICAL SPECIFICATION: ETAG 001 PART 1 PARAGRAPH 5.2.2 AND TECHNICAL REPORT TR020	
ESSENTIAL CHARACTERISTICS	PERFORMANCE
Resistance to fire	NPD

HARMONIZED TECHNICAL SPECIFICATION: ETAG 001 PART 1 ANNEX E	
ESSENTIAL CHARACTERISTICS	PERFORMANCE
Qualification for seismic load	NPD

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TERMINOLOGY AND SYMBOLS	
d	Diameter of anchor bolt or thread diameter
d_0	Drill hole diameter
d_{fix}	Diameter of clearance hole in the fixture
h_{ef}	Effective anchorage depth
h_1	Depth of the drilling hole
h_{min}	Minimum thickness of concrete member
T_{inst}	Torque moment to installation
t_{fix}	Thickness to be fixed
S_{min}	Minimum allowable spacing
C_{min}	Minimum allowable edge distance
N_{Rk}	Characteristic tensile resistance for combined pull-out and concrete cone failure for single anchor
γ_2	Partial safety factors for installation
$S_{cr,Np}$	Spacing for ensuring the transmission of the characteristic resistance of a single anchor without spacing and edge effects in case of pullout failure
$C_{cr,Np}$	Edge distance for ensuring the transmission of the characteristic tensile resistance of a single anchor without spacing and edge effects in case of pullout failure
$S_{cr,N}$	Spacing for ensuring the transmission of the characteristic tensile resistance of a single anchor without spacing and edge effects in case of concrete cone failure
$C_{cr,N}$	Edge distance for ensuring the transmission of the characteristic tensile resistance of a single anchor without spacing and edge effects in case of concrete cone failure
$S_{cr,sp}$	Spacing for ensuring the transmission of the characteristic tensile resistance of a single anchor without spacing and edge effects in case of splitting failure
$C_{cr,sp}$	Edge distance for ensuring the transmission of the characteristic tensile resistance of a single anchor without spacing and edge effects in case of splitting failure
$\psi_{c,ucr}$	Increasing factor for un-cracked concrete
$\psi_{c,cr}$	Increasing factor for cracked concrete
k	Factor for concrete edge failure
F	Service load in un-cracked (ucr) or cracked concrete (cr)
δ_0	Short term displacement under service load in un-cracked (uncr) or cracked concrete (cr)
δ_∞	Long term displacement under service load in un-cracked (uncr) or cracked concrete (cr)
NPD	No declared performance

Regolamento REACH n°1907/2006

Estimate customer,
We inform you that in the REACH supply chain our company is classified as DU: Downstream-user.
About the product detailed in the point 1 we confirm you that we don't use in our production substances classified as SVHC according to the Candidate List published on ECHA site web:
http://echa.europa.eu/chem_data/candidate_list_table_en.asp.
You can download the safety data sheet of the product from our web site http://www.diager.com/documentation.html

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10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Name and function	Place and date of issue	Signature
François Defougères **Président Directeur général**	**Poligny – France** **17.02.2016**	

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