Performance data

Anchor diameter			M8	M10	M12	M16	M20	M24
Perm. centered tensile load[1] of a single anchor w/o edge influence	**Pressure zone** (uncracked concrete C20/25 M8: $s \geq 3\ h_{ef}$, $c \geq 1.5\ h_{ef}$ M10-M24: $s \geq 2\ h_{ef}$, $c \geq 1\ h_{ef}$)	**N_{perm} [kN] = C20/25** 50°C[2]/80°C[3]	7.9	11.9	15.9	19.8	29.8	35.7
Perm. transv. load[1] of a single anchor w/o edge influence	**Pressure zone** (uncracked concrete C20/25, $c \geq 10\ h_{ef}$)	**V_{perm} [kN] = C20/25**	5.1	8.0	12.0	22.3	34.9	50.3
Permissible bending torque		**M_{perm} [Nm]**	10.9	21.1	37.1	94.9	185.7	320.6
Fire resistance duration		**F30 [kN]**	2.3	3.64	5.26	9.79	15.28	22.01
		F60 [kN]	1.29	2.04	3.07	5.72	8.93	12.86
		F90 [kN]	0.79	1.3	2.0	3.68	5.75	8.28
		F120 [kN]	0.53	1.0	1.5	2.67	4.16	6.0

Characteristic values

		M8	M10	M12	M16	M20	M24
Minimum axial spacing	**s_{min} [mm]**	40	45	55	65	85	105
Axial spacing	**$s_{cr,N}$ [mm]**	240	180	220	250	340	420
Minimum edge spacing	**c_{min} [mm]**	40	45	55	65	85	105
Edge spacing	**$c_{cr,N}$ [mm]**	120	90	110	125	170	210
Minimum component thickness	**h_{min} [mm]**	110	120	140	160	220	260
Effective anchoring depth	**h_{ef} [mm]**	80	90	110	125	170	210
Nom. drill dia.	**d_0 [mm]**	10	12	14	18	25	28
Drill cutting dia.	**$d_{cut} \leq$ [mm]**	10.5	12.5	14.5	18.5	25.5	28.5
Drilled hole depth	**$h_0 \geq$ [mm]**	80	90	110	125	170	210
Through-hole in component to be connected	**$d_f \leq$ [mm]**	9	12	14	18	22	26
Torque during anchoring	**T_{inst} = [Nm]**	10	20	40	80	120	180
Cleaning brush dia.	**D [mm]**	10.8	13	15	19	27	29

Drill hole cleaning

M8 – M24: 1x blow-out, 1x brush-out, 1x blow-out, 1x brush-out

Cleaning brush (steel)	**Art. No.** P. Qty. = 1	**0905 499 001**	**0905 499 002**	**0905 499 003**	**0905 499 004**	**0905 499 006**	**0905 499 008**[4]
Machine mounting	**Art. No.** P. Qty. = 1	Hexagon: **Art. No. 0905 499 101**		SDS plus: **Art. No. 0905 499 102**			–
Extension	**Art. No.** P. Qty. = 1	**0905 499 111**					–
Brush template	**Art. No.** P. Qty. = 1	**0905 499 099**					
Blow-out pump	**Art. No.** P. Qty. = 1	Blow-out pump: **Art. No. 0903 990 001**					

Anchor dimensions

Anchor diameter		M8		M10				M12					M16					M20			M24	
Total length	**l [mm]**	110	150	115	130	165	190	135	160	210	250	300	165	190	230	250	300	220	260	300	260	300
max. mounting height	**t_{fix} [mm]**	20	60	15	30	65	90	10	35	85	125	175	20	45	85	105	155	20	60	100	15	55
Designation Anchor bar		W-VD-A/S M8-20/110	W-VD-A/S M8-60/150	W-VD-A/S M10-15/115	W-VD-A/S M10-30/130	W-VD-A/S M10-65/165	W-VD-A/S M10-90/190	W-VD-A/S M12-10/135	W-VD-A/S M12-35/160	W-VD-A/S M12-85/210	W-VD-A/S M12-125/250	W-VD-A/S M12-175/300	W-VD-A/S M16-20/165	W-VD-A/S M16-45/190	W-VD-A/S M16-85/230	W-VD-A/S M16-105/250	W-VD-A/S M16-155/300	W-VD-A/S M20-20/220	W-VD-A/S M20-60/260	W-VD-A/S M20-100/300	W-VD-A/S M24-15/260	W-VD-A/S M24-55/300
W-VD-A/S Anchor Bar, galvanized steel	**Art. No.**	**5915 108 110**	**5915 108 150**	**5915 110 115**	**5915 110 130**	**5915 110 165**	**5915 110 190**	**5915 112 135**	**5915 112 160**	**5915 112 210**	**5915 112 250**	**5915 112 300**	**5915 116 165**	**5915 116 190**	**5915 116 230**	**5915 116 250**	**5915 116 300**	**5915 120 220**	**5915 120 260**	**5915 120 300**	**5915 124 260**	**5915 124 300**
Packing unit	**P. Qty.**	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5
Designation Shear-anchor mortar cartridge		W-VD M8	W-VD M8	W-VD M10	W-VD M10	W-VD M10	W-VD M10	W-VD M12	W-VD M12	W-VD M12	W-VD M12	W-VD M12	W-VD M16	W-VD M16	W-VD M16	W-VD M16	W-VD M16	W-VD M20	W-VD M20	W-VD M20	W-VD M24	W-VD M24
W-VD shear-anchor mortar cartridge	**Art. No.**	**5915 008 080**	**5915 008 080**	**5915 010 080**	**5915 010 080**	**5915 010 080**	**5915 010 080**	**5915 012 095**	**5915 012 095**	**5915 012 095**	**5915 012 095**	**5915 012 095**	**5915 016 095**	**5915 016 095**	**5915 016 095**	**5915 016 095**	**5915 016 095**	**5915 020 175**	**5915 020 175**	**5915 020 175**	**5915 024 210**	**5915 024 210**
Packing unit	**P. Qty. [pieces]**	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	5	5

[1] The part safety coefficients of the resistances and a part safety coefficient of the effects of γ_F = 1.4 have been taken into account. For the combination of tensile and transverse loads, for edge influence and dowel groups, please refer to the Directive for European Technical Approval (ETAG) Appendix C.
[2] Maximum long-term temperature.
[3] Maximum short-term temperature.
[4] Cleaning brush without M6 connecting thread.