

W-ED/S, W-ED DRIVE-IN ANCHOR

13.1

Performance data (5.6-8.8 screw)		M5 ⁸⁾	M6	M8 x 30	M8 x 40	M10 x 30	M10 x 40	M12	M16	M20	
Perm. centr. tensile load ¹⁾ on a single anchor without edge influence	Pressure zone (uncracked concrete C20/25 ²⁾ , $s \geq 3 h_{ef}$, $c \geq 1.5 h_{ef}$)	N_{perm} [kN] = C20/25 ²⁾	F_{rec} 1.4	3.3	2.8	3.6	3.3	5.1	7.1	10.5	14.3
	Perm. transverse load ¹⁾ on a single anchor without edge influence	Pressure zone (uncracked concrete C20/25 ²⁾ , $c \geq 10 h_{ef}$)	V_{perm} [kN] = C20/25 ^{2) 3)}	F_{rec} 1.5	2.1	3.9	3.9	3.9	4.1	9.0	16.8
Multiple attachment of non-load-bearing systems in concrete ⁴⁾		F_{perm} [kN] \geq C20/25	F_{rec} 0.3	1.2	1.7	2.0	2.0	2.0	2.4	-	-
Permissible bending torque ⁵⁾ uncracked concrete/multiple fastening		M_{perm} [Nm]	-	2.7/ 3.3	8.1/8.1		15.8/15.8		27.8/ 27.8	71.0	138.6
Perm. loading under fire load ⁴⁾ (Technical Report TR 020) For axial and edge distances, see European Technical Approval ETA-05/0120		R30; F_{perm} [kN]	-	0.8	0.9		1.5		1.5	-	-
		R60; F_{perm} [kN]	-	0.8	0.9		1.5		1.5	-	-
		R90; F_{perm} [kN]	-	0.4	0.9		1.5		1.5	-	-
		R120; F_{perm} [kN]	-	0.2	0.4		1.0		1.2	-	-
Fire resistance duration ⁶⁾		F30 [kN]	-	1.7	1.7	3.0	-	4.7	6.9	12.5	18.0
		F60 [kN]	-	0.7	0.7	1.5	-	2.4	3.5	5.6	8.5
		F90 [kN]	-	0.4	0.4	0.8	-	1.3	1.8	3.5	5.5
		F120 [kN]	-	0.3	0.3	0.6	-	1.0	1.4	2.5	4.4
Minimum axial spacing		s_{min} [mm]	60	55	60	80	100	100	120	150	160
Axle base ⁷⁾ uncracked concrete/multiple fastening		$s_{cr,N}/s_{cr}$ [mm]	75	90/ 130	90/180	120/210	90/230	120/170	150/ 170	195	240
Minimum edge spacing		c_{min} [mm]	95	95	95	95	115	135	165	200	260
Edge spacing ⁷⁾ uncracked concrete/multiple fastening		$c_{cr,N}/c_r$ [mm]	37.5	45/65	45/90	60/105	45/115	60/85	75/85	97.5	120
Minimum component thickness		h_{min} [mm]	100	100	100	100	120	120	130	160	200

Characteristic installation values		M5 ⁸⁾	M6	M8 x 30	M8 x 40	M10 x 30	M10 x 40	M12	M16	M20
Nom. drill dia.	d_0 [mm]	8	8	10	10	12	12	15	20	25
Drill cutting dia.	$d_{cut} \leq$ [mm]	8.45	8.45	10.45	10.45	12.5	12.5	15.5	20.55	25.55
Drilled hole depth	h_0 [mm]	25	30	30	40	30	40	50	65	80
Through-hole in the component being connected	$d_f \leq$ [mm]	6	7	9	9	12	12	14	18	22
Effective anchoring depth	h_{ef} [mm]	25	30	30	40	30	40	50	65	80
Thread depth (max. screw-in depth)	L_{th} [mm]	10	13	13	20	12	15	18	23	34
Minimum screw-in depth	L_{sdmin} [mm]	6	7	9	9	10	11	13	18	22
Torque while installing anchor	$T_{inst} =$ [Nm]	3	4	8	8	15	15	35	60	120

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Würth System Components



¹⁾The part safety coefficients of the resistances regulated in the approval and a part safety coefficient of the effects of $\gamma_f = 1.4$ have been taken into account. For the combination of tensile and transverse loads, for edge influence and anchor groups, please refer to the Guideline for European Technical Approval (ETAG), Appendix C.

²⁾The concrete has normal reinforcement. Higher values are possible for higher concrete strengths.

³⁾Steel quality 5.6. With a higher steel quality, higher transverse load values apply.

⁴⁾The permissible loads were determined without axial and edge influence.

⁵⁾Steel quality 5.6. With a higher steel quality, higher permissible bending moments apply.

⁶⁾Fire resistance duration: Drive-in anchor W-ED/S in conjunction with screws of the strength classes ≥ 5.6 .

⁷⁾The minimum axle base and the minimum edge clearance must be complied with!

⁸⁾Without approval.