

# DRIVE-IN ANCHOR W-ED/A4 – W-ED/HCR

13.2

Performance data			M6	M8 x 30	M8 x 40	M10	M12	M16	M20
Perm. centered tensile load <sup>1)</sup> on a single anchor without edge influence	Pressure zone (uncracked concrete C20/25 <sup>2)</sup> , $s \geq 3 h_{ef}$ , $c \geq c_{min}$ )	$N_{perm.} [kN]$ = C20/25 <sup>2)</sup>	3.3	3.3	3.6	6.1	8.5	12.6	17.2
	Pressure zone (uncracked concrete C20/25 <sup>2)</sup> , $c \geq 10 h_{ef}$ )	$V_{perm.} [kN]$ = C20/25 <sup>2)</sup>	3.2	4.6		6.0	11.9	19.2	30.7
Multiple attachment of non-load-bearing systems in concrete <sup>3)</sup>		$F_{perm.} [kN]$ $\geq C20/25$	1.2	1.7	2.0	2.0	2.4	-	-
Permissible bending torque		$M_{perm.} (A4-70) [Nm]$	5.0	11.9		23.8	42.1	106.7	207.9
		$M_{perm.} (A4-80) [Nm]$	6.4	16.1		32.2	56.4	142.9	278.7
Perm. loading under fire load <sup>3)</sup> (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 <sup>4)</sup>		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

Characteristic installation values		M6	M8 x 30	M8 x 40	M10	M12	M16	M20
Minimum axial spacing	$s_{min} [mm]$	50	60	80	100	120	150	160
Minimum edge spacing	$c_{min} [mm]$	80	95	95	135	165	200	260
Minimum component thickness	$h_{min} [mm]$	100	100	100	130	140	160	250
Effective anchoring depth	$h_{ef} [mm]$	30	30	40	40	50	65	80
Nom. drill dia.	$d_0 [mm]$	8	10		12	15	20	25
Drill cutting dia.	$d_{cut} \leq [mm]$	8.45	10.45		12.5	15.5	20.55	25.55
Drill hole depth	$h_0 [mm]$	30	30	40	40	50	65	80
Through-hole in the component being connected	$d_f \leq [mm]$	7	9		12	14	18	22
Thread depth (max. screw-in depth)	$l_{th} [mm]$	13	13	20	15	18	23	34
Minimum screw-in depth	$l_{smin} [mm]$	7	9		11	13	18	22
Torque while installing anchor	$T_{inst} = [Nm]$	4	8		15	35	60	120

## Würth System Components



<sup>1)</sup> 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.

<sup>2)</sup> The concrete has normal reinforcement. Higher values are possible for higher concrete strengths.

<sup>3)</sup> The permissible loads were determined without axial and edge influence.

<sup>4)</sup> Fire resistance duration: Drive-in anchor W-ED/A4 in conjunction with stainless steel A4 screws.