

Performance data										
Anchor diameter [in mm]			M5 <sup>8)</sup>	M6	M8	M10	M12	M16	M20	
<b>Perm. centr. tensile force<sup>1)</sup></b> of an indiv. anchor w/o edge influence	<b>Pressure zone</b> (uncracked concrete C20/25 <sup>2)</sup> , s ≥ 3 h <sub>ef</sub> , c ≥ 1.5 h <sub>ef</sub> )	<b>N<sub>perm</sub> [kN] = C20/25<sup>2)</sup></b>	F <sub>rec</sub> 1.4	3.3	2.8	3.6	5.1	7.1	10.5	14.3
<b>Perm. transv. load<sup>1)</sup></b> of an individual anchor w/o edge influence	<b>Pressure zone</b> (uncracked concrete C20/25 <sup>2)</sup> , c ≥ 10 h <sub>ef</sub> )	<b>V<sub>perm</sub> [kN] = C20/25<sup>2)</sup></b>	F <sub>rec</sub> 1.5	2.1	3.9	3.9	4.1	9.0	16.8	26.2
<b>Multiple attachment of non load-bearing systems in concrete<sup>4)</sup></b>		<b>F<sub>perm</sub> [kN] ≥ C20/25</b>	F <sub>rec</sub> 0.3	1.2	1.7	2.0	2.0	2.4	-	-
<b>Permissible bending torque<sup>4)</sup></b> uncracked concrete/multiple attachment		<b>M<sub>perm</sub> [Nm]</b>	-	2.7/3.3	8.1/8.1	15.8/15.8	27.8/27.8	71.0	138.6	
<b>Perm. load under fire stress<sup>4)</sup></b> (Technical Report TR 020) For axial and edge distances, see European Technical Approval ETA-05/0120		<b>R30; F<sub>perm</sub> [kN]</b>	-	0.8	0.9	1.5	1.5	-	-	
		<b>R60; F<sub>perm</sub> [kN]</b>	-	0.8	0.9	1.5	1.5	-	-	
		<b>R90; F<sub>perm</sub> [kN]</b>	-	0.4	0.9	1.5	1.5	-	-	
		<b>R120; F<sub>perm</sub> [kN]</b>	-	0.2	0.4	1.0	1.2	-	-	
<b>Fire-resistance time<sup>6)</sup></b>		<b>F30 [kN]</b>	-	1.7	1.7	3.0	4.7	6.9	12.5	18.0
		<b>F60 [kN]</b>	-	0.7	0.7	1.5	2.4	3.5	5.6	8.5
		<b>F90 [kN]</b>	-	0.4	0.4	0.8	1.3	1.8	3.5	5.5
		<b>F120 [kN]</b>	-	0.3	0.3	0.6	1.0	1.4	2.5	4.4

Characteristic values									
<b>Minimum axial spacing</b>	<b>s<sub>min</sub> [mm]</b>	60	55	60	80	100	120	150	160
<b>Axial spacing<sup>7)</sup></b> uncracked concrete/multiple attachment	<b>s<sub>cr,N</sub> / s<sub>cr</sub> [mm]</b>	75	90 / 130	90/ 180	120/ 210	120/170	150/170	195	240
<b>Minimum edge spacing</b>	<b>c<sub>min</sub> [mm]</b>	95	95	95		135	165	200	260
<b>Edge spacing<sup>7)</sup></b> uncracked concrete/multiple attachment	<b>c<sub>cr,N</sub> / c<sub>cr</sub> [mm]</b>	37.5	45 / 65	45/ 90	60/ 105	60/85	75/85	97.5	120
<b>Minimum component thickness</b>	<b>h<sub>min</sub> [mm]</b>	100	100	100		120	130	160	200
<b>Effective anchoring depth</b>	<b>h<sub>ef</sub> [mm]</b>	25	30	30	40	40	50	65	80
<b>Nom. drill dia.</b>	<b>d<sub>0</sub> [mm]</b>	8	8	10		12	15	20	25
<b>Drill cutting dia.</b>	<b>d<sub>cut</sub> ≤ [mm]</b>	8.45	8.45	10.45		12.5	15.5	20.55	25.55
<b>Drill hole depth</b>	<b>h<sub>0</sub> = [mm]</b>	25	30	30	40	40	50	65	80
<b>Through-hole in the comp. to be connected</b>	<b>d<sub>f</sub> ≤ [mm]</b>	6	7	9		12	14	18	22
<b>Torque during anchoring</b>	<b>T<sub>inst</sub> = [Nm]</b>	3	4	8		15	35	60	120

Anchor dimensions									
<b>Total length</b>	<b>L<sub>H</sub> [mm]</b>	25	30	30	40	40	50	65	80
<b>Thread depth (max. screw-in depth)</b>	<b>L<sub>th</sub> [mm]</b>	10	13	13	20	15	18	23	34
<b>Minimum screw-in depth</b>	<b>L<sub>smin</sub> [mm]</b>	6	7	9		11	13	18	22
<b>Designation</b>		W-ED/M5x25	W-ED/S M6x30	W-ED/S M8x30	W-ED/S M8x40	W-ED/S M10x40	W-ED/S M12x50	W-ED/S M16x65	W-ED/S M20x80
<b>Art. No.</b>		0904 05 <sup>5)</sup>	0904 010 06	0904 010 08	0904 010 081	0904 010 10	0904 010 12	0904 010 16	0904 010 20
<b>Packing unit</b>	<b>P. Qty.</b>	100	100	100	100	50	50	25	25
<b>Marking-Spreading Tool with hand guard</b> (→ visual setting check) <b>Art. No.</b> P. Qty. = 1		-	-	0904 022 08	0904 022 081	0904 022 10	0904 022 12	0904 022 16	0904 022 20
<b>Spreading Tool</b> (→ no visual setting check) <b>Art. No.</b> P. Qty. = 1		0904 05 <sup>5)</sup>	0904 020 06	0904 020 08	0904 020 081	0904 020 10	0904 020 12	0904 020 16	0904 020 20

**Würth System Components**


- <sup>1)</sup> The approval takes account of the part-safety coefficients of the resistances and a part-safety coefficient of the effects of γ<sub>f</sub> = 1.4. For the combination of tensile and transverse loads, for edge influence and dowel 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> Steel quality 5.6. With a higher steel quality, higher transverse load values apply.
- <sup>4)</sup> The permissible loads were determined without axial and edge influence.
- <sup>5)</sup> Steel quality 5.6. With a higher steel quality, higher permissible bending moments apply.
- <sup>6)</sup> Fire resistance duration: Drive-in anchor W-ED/S in conjunction with screws of the strength classes ≥ 5.6.
- <sup>7)</sup> **The minimum axial spacing and the minimum edge spacing must be complied with!**
- <sup>8)</sup> Without approval