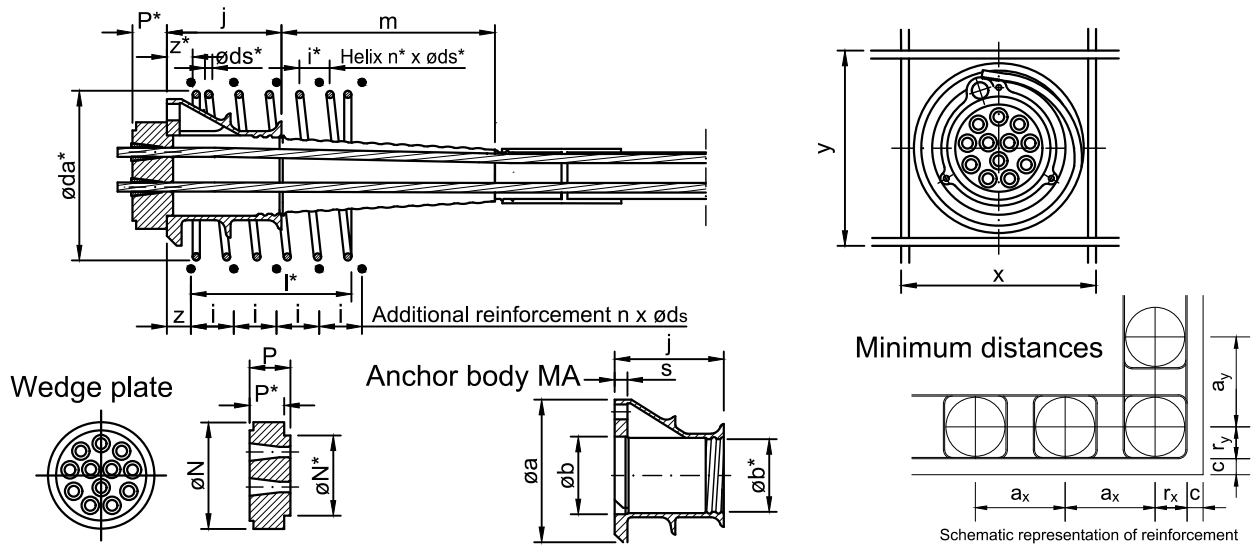


Multi-plane anchor body MA with additional reinforcement and with helix and with minimum centre distances, prestressing steel strand Y1770S7 15.3, Y1770S7 15.7, Y1860S7 15.3, and Y1860S7 15.7



Tendon		68 05	68 07	68 09	68 12	68 15	68 19	68 22
Number of strands		5	7	9	12	15	19	22
Strand arrangement								
Wedge plate	øN	117	130	145	170	190	210	220
	øN*	88	96	112	128	148	159	176
	thickness P	55	60	60	65	70	80	85
	depth P*	47	52	52	55	60	68	73
Anchor body MA	øa	150	170	190	220	250	280	305
	øb	90	98	114	130	150	162	179
	øb*	80	90	100	120	130	145	161
	height j	90	100	125	180	200	220	220
	thickness s	18	18	15	17	19	23	26,5
Trumpet length	m	240	210	280	350	390	430	550
<b>Minimum concrete compressive strength at time of stressing</b>								
	f <sub>cm, 0, cube</sub> N/mm <sup>2</sup>	39	39	39	39	39	39	39
	f <sub>cm, 0, cyl</sub> N/mm <sup>2</sup>	32	32	32	32	32	32	32
Minimum centre distance	a <sub>x</sub> , a <sub>y</sub>	225	265	290	330	370	410	440
Minimum edge distance	<sup>1)</sup> (plus c) <sup>2)</sup> r <sub>x</sub> , r <sub>y</sub>	105	125	135	155	175	195	210
<b>Helix</b>								
Minimum number of turns	n*	5	5	6	7	8	8	8.5
Minimum wire diameter	øds*	12	14	14	14	14	16	16
Maximum spacing	z*	40	40	40	45	50	50	55
Minimum external diameter	øda*	180	200	220	255	310	345	370
Maximum pitch	max. i*	50	50	50	50	50	50	50
Minimum length	min. l*	235	240	290	340	390	395	420
<b>Additional reinforcement, ribbed reinforcing steel R<sub>e</sub> ≥ 500 N/mm<sup>2</sup></b>								
Minimum numbers of layers	n	5	6	7	8	8	8	8
Minimum bar diameter	øds	12	12	14	14	16	16	16
Maximum spacing	z	40	40	40	45	50	50	55
Maximum spacing	i	45	50	55	50	60	65	55
External dimensions	x,y	205	245	270	310	350	390	420

<sup>1)</sup> Minimum dimensions <sup>2)</sup> c ... concrete cover

Dimensions in mm

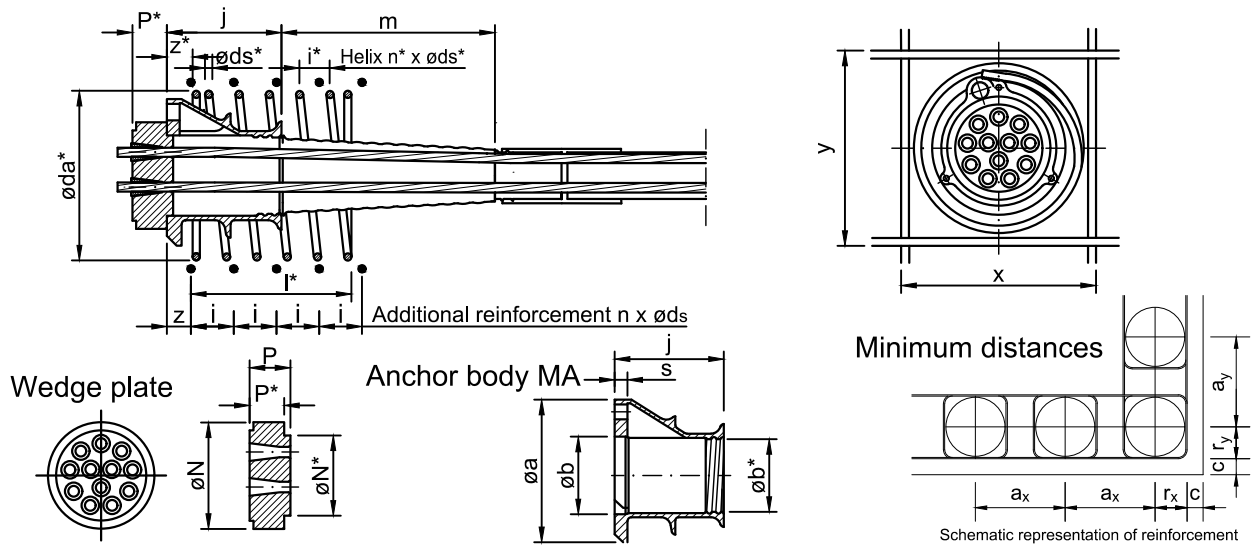


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**Bonded prestressing system**  
**DYWIDAG - Strand**  
Anchorage with multi-plane anchor body MA  
with additional reinforcement and with helix  
Data sheet for tendons 68 05 to 68 22

**extended Annex 11**  
following European technical  
assessment  
ETA-13/0815

Multi-plane anchor body MA with additional reinforcement and with helix and with minimum centre distances, prestressing steel strand Y1770S7 15.3, Y1770S7 15.7, Y1860S7 15.3, and Y1860S7 15.7



Tendon		68 27	68 31	68 37	68 43	68 49	68 55
Number of strands		27	31	37	43	49	55
Strand arrangement							
Wedge plate	øN	240	270	270	320	340	340
	øN*	188	214	214	251	262	262
	thickness P	95	100	115	130	140	140
	depth P*	80	80	95	110	120	120
Anchor body MA	øa	330	385	420	465	510	510
	øb	190	217	217	254	266	266
	øb*	161	196	196	252	252	252
	height j	240	350	350	380	420	420
	thickness s	30	40	50	50	50	50
Trumpet length	m	550	570	570	950	780	780
<b>Minimum concrete compressive strength at time of stressing</b>							
	f <sub>cm, 0, cube</sub> N/mm <sup>2</sup>	39	39	39	53	53	53
	f <sub>cm, 0, cyl</sub> N/mm <sup>2</sup>	32	32	32	43	43	43
Minimum centre distance	a <sub>x</sub> , a <sub>y</sub>	490	600	660	640	680	710
Minimum edge distance <sup>1)</sup> (plus c) <sup>2)</sup>	r <sub>x</sub> , r <sub>y</sub>	235	290	320	310	330	345
<b>Helix</b>							
Minimum number of turns	n*	8,5	9	9	10	10	11
Minimum wire diameter	øds*	16	20	20	20	20	20
Maximum spacing	z*	50	60	70	70	70	70
Minimum external diameter	øda*	420	530	570	530	550	580
Maximum pitch	max. i*	50	60	60	55	60	55
Minimum length	min. l*	420	540	540	555	600	610
<b>Additional reinforcement, ribbed reinforcing steel R<sub>e</sub> ≥ 500 N/mm<sup>2</sup></b>							
Minimum numbers of layers	n	10	8	10	10	13	14
Minimum bar diameter	øds	20	20	20	20	20	20
Maximum spacing	z	55	40	40	50	50	50
Maximum spacing	i	60	80	70	70	60	55
External dimensions	x,y	470	580	640	620	660	690

<sup>1)</sup> Minimum dimensions <sup>2)</sup> c ... concrete cover

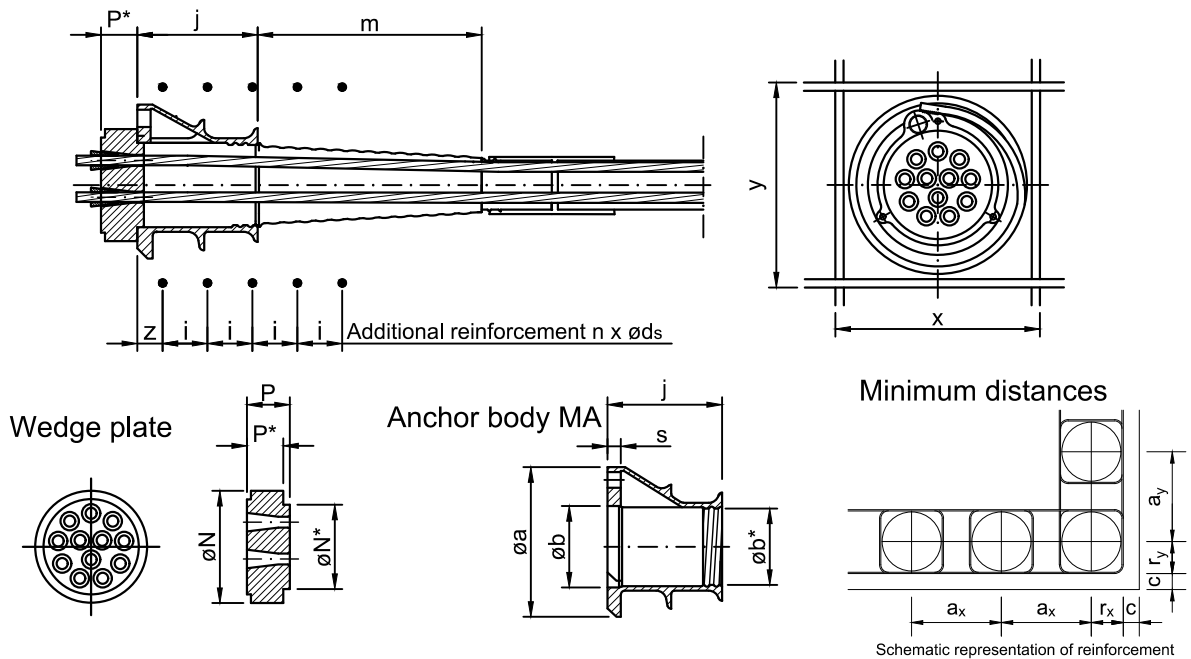
Dimensions in mm

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**Bonded prestressing system**  
**DYWIDAG - Strand**  
 Anchorage with multi-plane anchor body MA  
 with additional reinforcement and with helix  
 Data sheet for tendons 68 27 to 68 55

**extended Annex 12**  
 following European technical  
 assessment  
 ETA-13/0815

Multi-plane anchor body MA with additional reinforcement and without helix and with minimum centre distances, prestressing steel strand Y1770S7 15.3, Y1770S7 15.7, Y1860S7 15.3, and Y1860S7 15.7



Tendon		68 05	68 07	68 09	68 12	68 15	68 19	68 22
Number of strands		5	7	9	12	15	19	22
Strand arrangement								
Anchor head	øN	117	130	145	170	190	210	220
	øN*	88	96	112	128	148	159	176
	thickness P	55	60	60	65	70	80	85
	depth P*	47	52	52	55	60	68	73
Anchor body MA	øa	150	170	190	220	250	280	305
	øb	90	98	114	130	150	162	179
	øb*	80	90	100	120	130	145	161
	height j	90	100	125	180	200	220	220
	thickness s	18	18	15	17	19	23	26,5
Trumpet length	m	240	210	280	350	390	430	550
<b>Minimum concrete compressive strength at time of stressing</b>								
	$f_{cm, 0, cube}$ N/mm <sup>2</sup>	39	39	39	39	39	39	39
	$f_{cm, 0, cyl}$ N/mm <sup>2</sup>	32	32	32	32	32	32	32
	Minimum centre distance $a_x, a_y$	240	285	320	360	400	450	480
	Minimum edge distance <sup>1)</sup> (plus c) <sup>2)</sup> $r_x, r_y$	110	135	150	170	190	215	230
<b>Additional reinforcement, ribbed reinforcing steel <math>R_e \geq 500</math> N/mm<sup>2</sup></b>								
	Minimum numbers of layers n	5	5	6	8	8	8	9
	Minimum bar diameter øds	16	16	16	16	16	20	20
	Maximum spacing z	40	40	40	40	40	40	40
	Maximum spacing i	50	50	50	50	50	55	50
	External dimensions <sup>3)</sup> x,y	220	260	285	315	360	390	410

<sup>1)</sup> Minimum dimensions <sup>2)</sup> c ... concrete cover

<sup>3)</sup> The external dimensions x, y have to be met exactly

Dimensions in mm



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