

Prestressed Concrete (PC Square Pile)

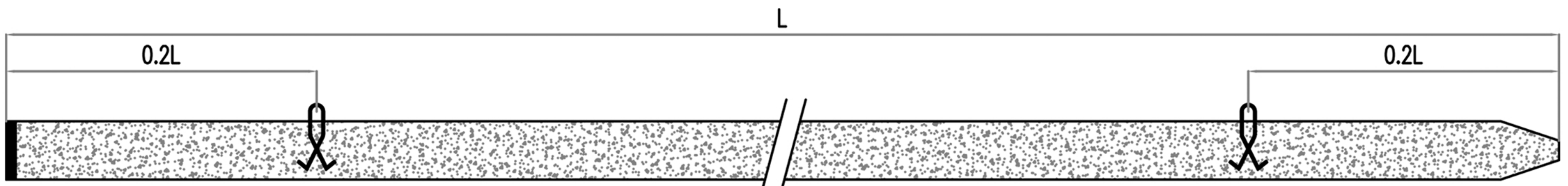
DESIGN & MANUFACTURING REFERENCE

Design	ACI 5434-15	Design, Manufacture and Instalation
	SNI 03-2847-2013	Structural Concrete Requirment

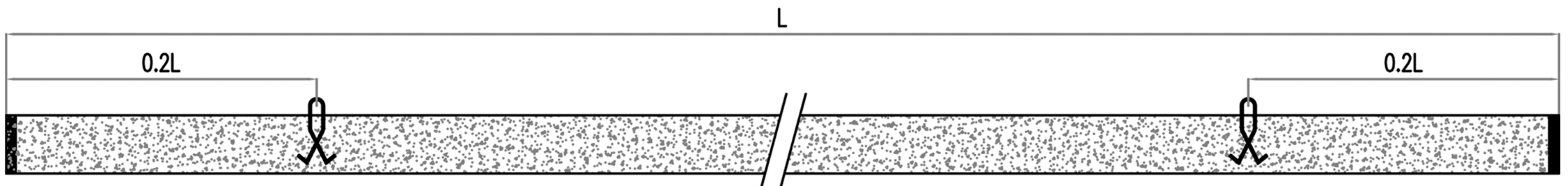
SPECIFICATION OF SQUARE MATERIAL

Item	Specification	Reference	
Aggregate		ASTM C33 - 2016	(Standard Specification Concrete Aggregates)
		SNI 8321 - 2016	(Concrete Aggregates Specification)
Cement		SNI 15-2049-2004	(Portland's Cement)
Admixture		ASTM C494-2016	(Standard Specification for Chemical Admixture for Concrete)
Concrete	Compresive Strenght at 28Days : 500kg/cm ² (Cube) 41,5Mpa (Cylinder)	ASTM C494-2016	(Structural Concrete Requirment)
PC Strand	KBjP-P7-RB	SNI 1154-2011	(Uncoated Seven Wire Stress Releved Strand for Prestress Concrete (P Standard/KBjP-P7)
	Grade 270	ASTM A-416	(Standard Specification for Uncoated Seven_Wire stress Releved Strand for Prestressed Concrete)
	SWPR7BL	JIS G 3536 : 2014	(Uncoated Stress-Releved Steel Wire and Strands for Prestressed Concrete)
Spiral Wire	SWM-A / SWM-P	JIS G 3532 : 2011	(Low Carbon Steel Wires)
Reinforcement Bar	BjTS 420 for D ≥ 13mm	SNI 2052-2017	(Concrete Reinfoecement Steel Bar)
	BjTS 280 for D < 13mm	SNI 2052-2017	(Concrete Reinfoecement Steel Bar)
Joint Plate	SS400	JIS G 3101 : 2011	(Roled Steel for General Structure)
Welding	AWS E6013	AWS D1.1 : 2000	(Structural Welding Code - Steel)

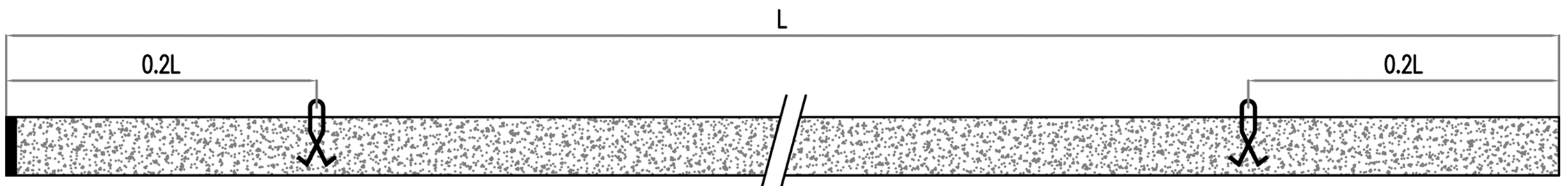
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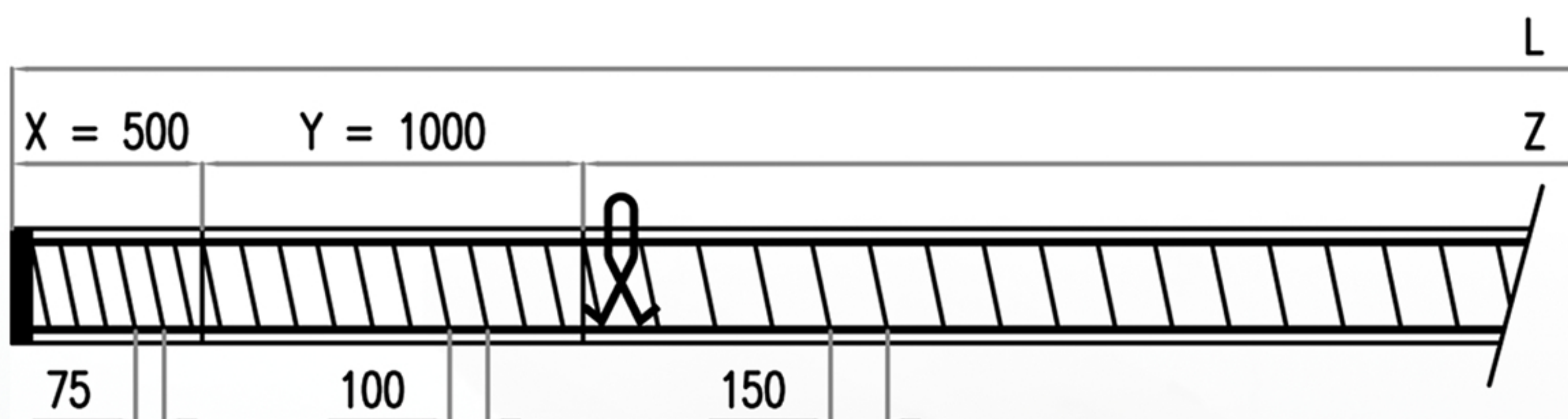
Single Plate Moncong



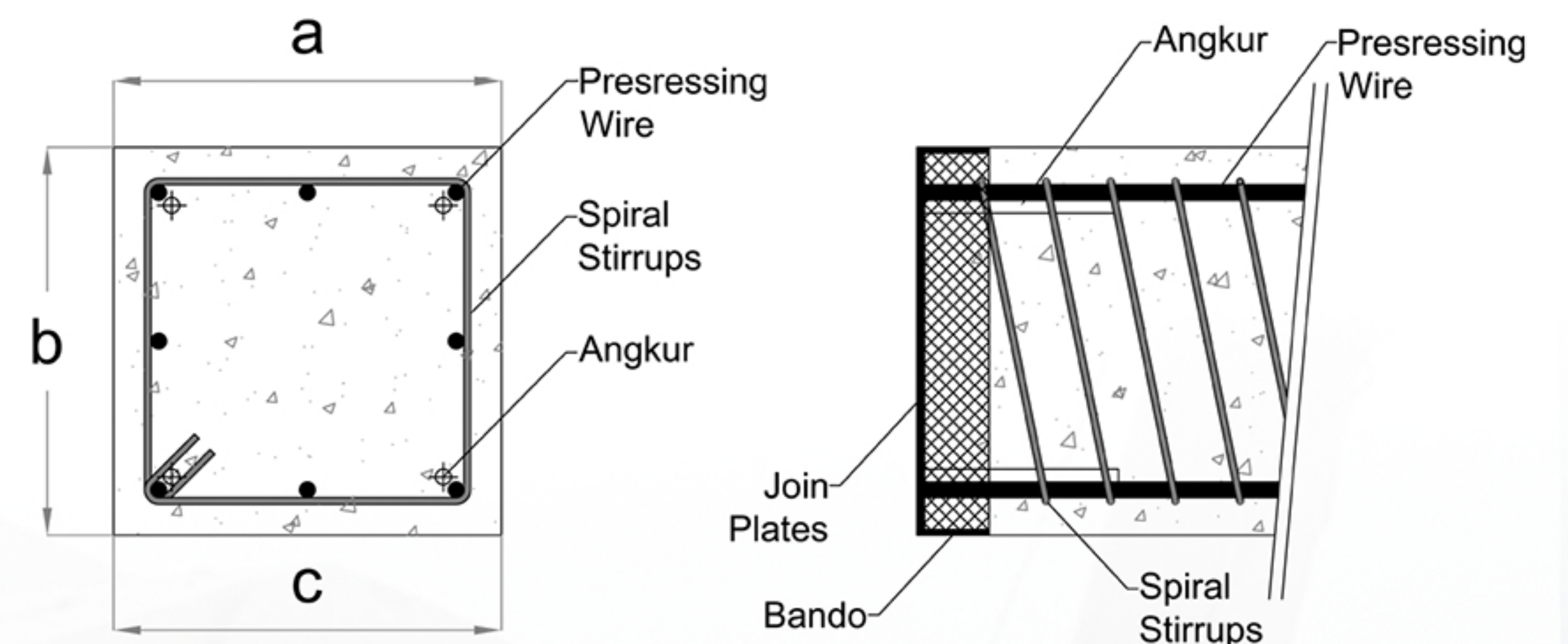
Double Plate (DP)



Single Plate Papak



Stirrups Pitch Instalation



Front View

Side View

UNITY STANDARD PC PILES DETAILS

Front View

Normal Size (w) (cm)	Pile Class	Available Length (L) (M)	Dimension			Nominal Weight (kg/m)	Main Reinforcement Pressing Wire		Link Size (Ø mm)	Stirrups Pitch at			Joint Plates (mm)	Bending Moment		Axial Comp. Load		Allowable Tension Load (Ton)
			a (mm)	b (mm)	c (mm)		(nos)	(Ø mm)		X (mm)	Y (mm)	Z (mm)		Crack (Ton.m)	Ultimate (Ton.m)	Allowable (Ton)	Ultimate (Ton)	
30 x 30	Class A	6 ~ 12	305	300	295	216	4	9.53	5,5	75 - 500	100 - 1000	150	6	3,17	8,67	116,56	242,07	24,81
	Class B	6 ~ 12	305	300	295	216	4	12,70	5,5	75 - 500	100 - 1000	150	8	4,13	9,08	111,35	232,81	44,11
	Class C	6 ~ 12	305	300	295	216	8	9.53	5,5	75 - 500	100 - 1000	150	8	4,41	8,57	109,86	230,16	49,62
35 x 35	Class A	6 ~ 12	355	350	345	294	4	12,70	5,5	75 - 500	100 - 1000	150	8	5,63	13,66	155,85	324,52	44,11
	Class B	6 ~ 12	355	350	345	294	8	9.53	5,5	75 - 500	100 - 1000	150	10	5,95	13,56	154,37	321,88	49,62
40 x 40	Class A	6 ~ 12	405	400	395	384	4	12,70	5,5	75 - 500	100 - 1000	150	8	7,50	20,19	207,21	430,35	44,11
	Class B	6 ~ 12	405	400	395	384	8	9.53	5,5	75 - 500	100 - 1000	150	10	7,87	20,09	205,72	427,70	49,62
	Class C	6 ~ 12	405	400	395	384	8	12,70	5,5	75 - 500	100 - 1000	150	10	10,44	20,80	195,30	409,18	88,22
45 x 45	Class A	6 ~ 12	455	450	445	486	4	12,70	5,5	75 - 500	100 - 1000	150	8	9,81	28,55	265,41	550,28	44,11
	Class B	6 ~ 12	455	450	445	486	8	12,70	5,5	75 - 500	100 - 1000	150	10	13,11	29,27	253,50	253,50	88,22
	Class C	6 ~ 12	455	450	445	486	12	12,70	5,5	75 - 500	100 - 1000	150	10	16,42	30,29	241,60	241,60	132,33
50 x 50	Class A	6 ~ 12	505	500	495	600	8	12,70	5,5	75 - 500	100 - 1000	150	10	16,26	39,67	318,56	663,16	88,22
	Class B	6 ~ 12	505	500	495	600	12	12,70	5,5	75 - 500	100 - 1000	150	12	19,94	40,89	306,65	641,98	132,33
	Class C	6 ~ 12	505	500	495	600	16	12,70	5,5	75 - 500	100 - 1000	150	12	23,62	42,01	294,74	620,81	176,44

Note : Concrete Grade K-500 (equal f_c' 42,28 Mpa) at 28 days