BUILDING AND HOUSING CP

DESCRIPTION

Precast concrete products for building components and precast houses include beams, columns, hollow core slabs, slabs/half slabs, stairs, and facades. Using a comprehensive precast system for building structures can save construction time. This is because mechanical, electrical, plumbing, and architectural work can be carried out simultaneously with the erection of precast structural components. The installation of all precast components can be done 24/7. This system also minimizes environmental impact caused by the construction process.

WIKA Beton also has a column and beam connection system for earthquake-resistant buildings called the PRESSS (Precast Seismic Structural System). For floor structures, WIKA Beton provides hollow core slab products with dimensional variations for spans up to 16 meters. This product is suitable for use in apartment floors, offices, shopping centers, and warehouses.

In addition to building components, WIKA Beton offers a knock-down precast house system that allows for quick assembly and has been tested for earthquake resistance. The product components consist of foundations, sloofs, columns, and ring beams. The installation process uses a connection system that is easy, fast, efficient, and can be done without heavy equipment.

Product Types

Floor Component
- Hollow Core Slab
- Half/Full Slab

Building Structure Component
- Precast Beam
- Precast Column

Precast House
- Beam, Column, Wall, and Foundation

DESIGN REFERENCE

Precast Building

Design

SNI 2847 : 2019	Indonesian Standard Code for Concrete Building Structural
SNI 6880 : 2016	Structural Concrete Spesification
SNI 1727-2013	Minimum Loads for Building Design and Other Structures
SNI 1726 : 2019	Indonesian Standard Code for Earthquake Resistance Planning for Building and Non-Building Structures
SNI 7833 : 2012	Indonesian Standard Code for Precast Concrete and Prestressed Concrete for Buildings

PROJECT REFERENCE

TNI/Polri Tower Housing – Jakarta
6 floor ; 5.000 m² ; 3 month (Structure works)
Precast Column, Beam & HCS
with PRESS System

St Carolus Borromeus Hospital – Jakarta
12 floor ; 25.000 m² ; 4,5 month (Structure works)
Precast PC wall for basement, Column, Beam &
HCS with PRESS System

Paspampres Tower Housing – IKN
12 floor ; 10.000 m² ; 2 month (Structure works)
Precast Column, Beam & Full Slab

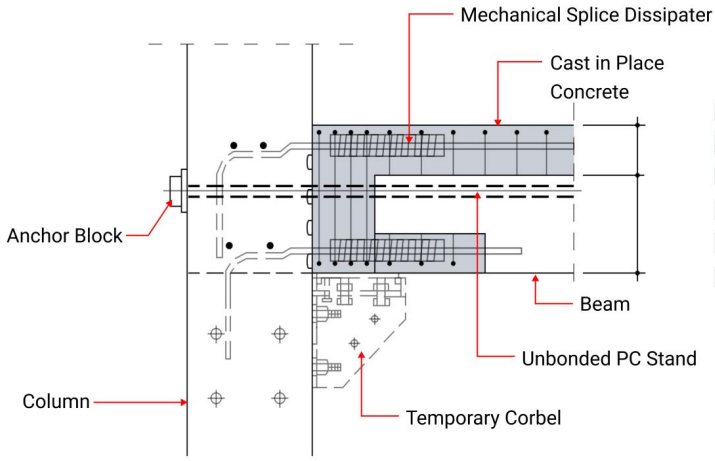
Joint System

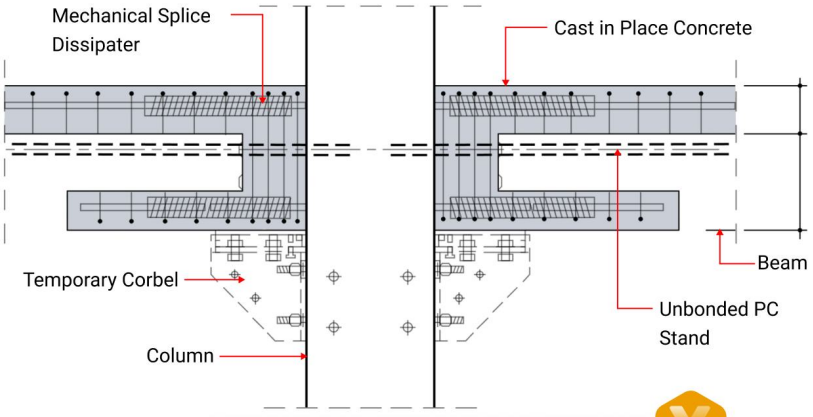
Precast Seismic Structural System (Presssindo System)

Registered Patent ID. S-00 2020 02178

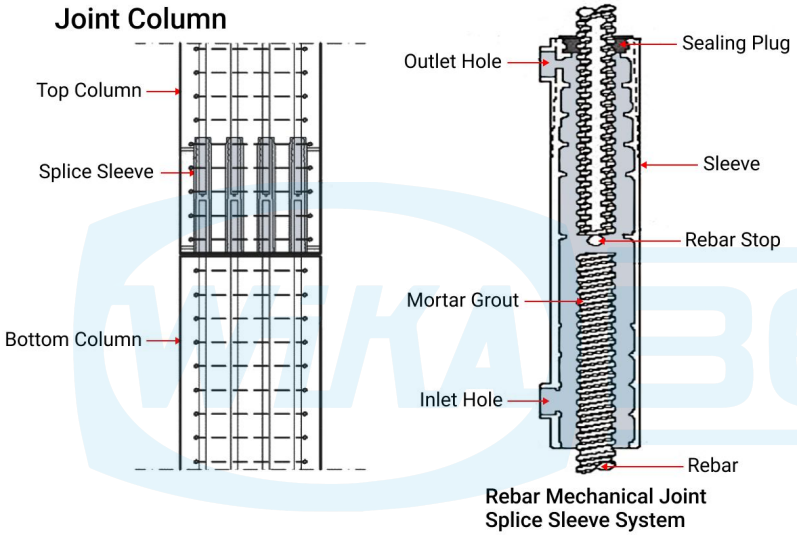
Earthquake-Resistant Precast Building System Using Unbounded Prestressing and Spiral Dissipaters

This system applies unbonded post-tensioning, making the structure flexible and capable of returning to its original position (self-centering) after shaking during an earthquake.



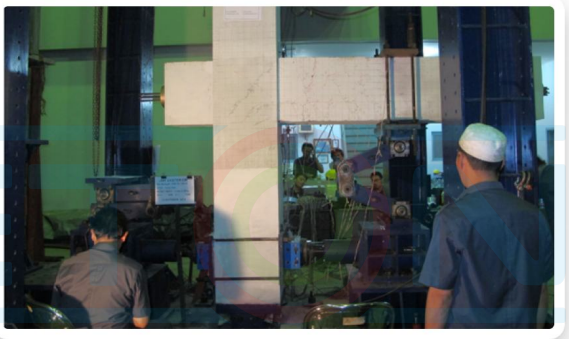


Joint Column



Rebar Mechanical Joint Splice Sleeve System

ID. S-00 2020 02178
Earthquake-Resistant Precast Building System Using Unbounded Prestressing and Spiral Dissipaters



PRESSS Column-Joint Certification
at Laboratorium Pengujian Pusat Penelitian dan Pengembangan
Perumahan dan Pemukiman - Bandung, West Java

INSTALLATION METHOD

Column Installation

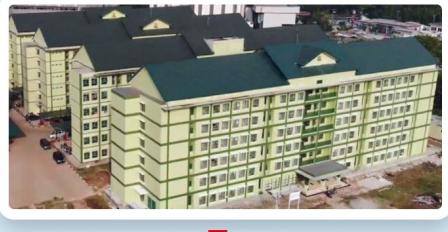
Beam Installation

Anchor Block and Prestress for PRESSS Column-Beam Joint

Hollow Core Slab Floor

Stair Installation

Facade Installation



Building Architectural Finishing

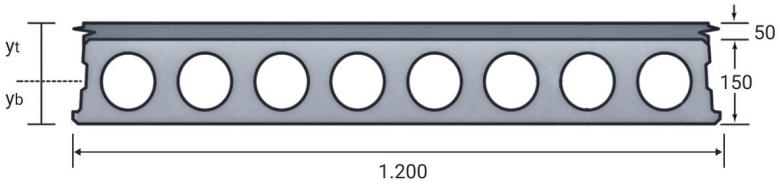
DESIGN REFERENCE

▸ Hollow Core Slab

Design

SNI 2847 : 2019	Indonesian Standard Code for Concrete Building Structural
SNI 6880 : 2016	Structural Concrete Spesification

PRODUCT SHAPE ▸ HCS 150



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	1.117,5	--
2	Cgc to Bottom fiber	yb	cm	7,4	10,6
3	Cgc to Top fiber	yt	cm	7,6	9,4
4	Moment of Inertia	Ix	cm⁴	28.987	66.028
5	Concrete Shear Width	bw	cm	34,7	34,7
6	Unit weight of HCS	w	kg/m'	268,2	412,2
7	Joint fill weight	q	kg/m'	13,0	13,0

Table of Superimposed load* (kN/m²)

HCS 150 (No Topping) — HCS = fc' 40 MPa

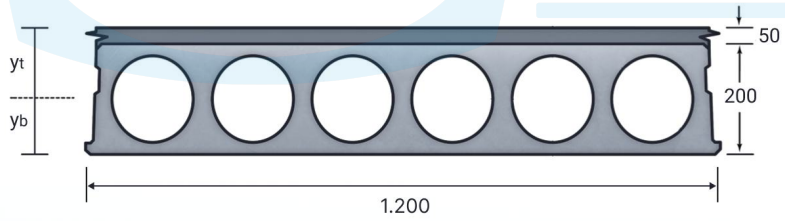
HCS	ØMn	ØVcw	Span [m]								
	kN.m	kN	4	4.5	5	5.5	6	6,5	7	7.5	8
150. 8. 4 - 09	43.9	63.5	9.6	7.1	5.3	4.0	3.0				
150. 8. 5 - 09	54.0	64.3	9.8	7.9	6.3	4.8	3.7				
150. 8. 6 - 09	63.8	65.2	11.9	9.5	7.3	5.6	4.4	3.4			
150. 8. 7 - 09	73.3	66.0	13.9	10.6	8.2	6.4	5.0	4.0	3.1		
150. 8. 8 - 09	82.6	66.8	15.0	11.6	9.0	7.1	5.6	4.5	3.6		
150. 8. 5 - 12	91.5	65.7	14.8	12.1	9.8	7.8	6.2	5.0	4.0	3.2	

HCS 150+50 (Topping 50mm) — HCS = fc' 40 MPa, Topping = fc' 30 MPa

HCS	ØMn	ØVcw	Span [m]								
	kN.m	kN	4	4.5	5	5.5	6	6,5	7	7.5	8
150. 8. 4 - 09	57.2	85.7	12.5	9.3	6.6	4.6	3.0				
150. 8. 5 - 09	70.4	86.2	13.8	11.4	8.2	5.9	4.1				
150. 8. 6 - 09	83.2	86.7	16.7	13.2	9.7	7.1	5.1	3.6			
150. 8. 7 - 09	95.8	87.1	20.1	15.0	11.1	8.3	6.2	4.5	3.1		
150. 8. 8 - 09	108.1	87.6	20.2	16.7	12.5	9.4	7.1	5.3	3.9		
150. 8. 5 - 12	120.2	86.9	20.0	17.2	13.8	10.6	8.1	6.1	4.6	3.3	

Note : • Superimposed load is life load and dead load (not include HCS self weight, topping concrete and joint filler).
• Superimposed load on left side heavy line is determine by concrete shear strength and on the right side heavy line is limited by concrete allowable tension stress value

PRODUCT SHAPE & SPECIFICATION ▸ HCS 200



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	1.195,8	--
2	Cgc to Bottom fiber	yb	cm	9,9	13,7
3	Cgc to Top fiber	yt	cm	10,1	11,3
4	Moment of Inertia	Ix	cm⁴	60.891	119.578
5	Concrete Shear Width	bw	cm	21,5	21,5
6	Unit weight of HCS	w	kg/m'	287,0	431,0
7	Joint fill weight	q	kg/m'	17,3	17,3

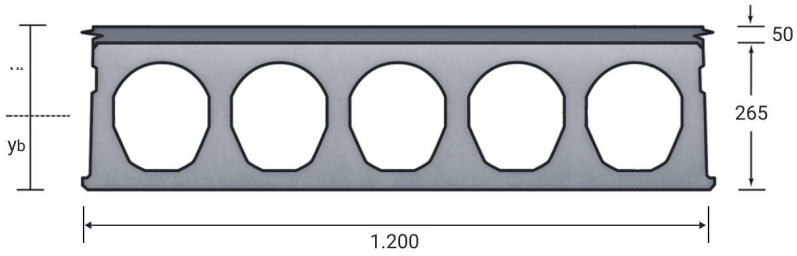
HCS 200 (No Topping) — HCS = fc' 40 MPa

HCS	ØMn	ØVcw	Span [m]																
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10,5	11	11,5	12	12,5
200. 6. 4 - 09	59.1	51.8	11.6	10.1	8.1	6.4	5.1	4.1	3.2											
200. 6. 5 - 09	72.9	52.5	11.8	10.3	9.1	7.9	6.2	5.0	4.0	3.1										
200. 6. 6 - 09	86.3	53.1	12.0	10.4	9.2	8.2	7.2	5.7	4.6	3.7	3.0									
200. 6. 7 - 09	99.5	53.8	12.1	10.6	9.3	8.1	7.5	6.5	5.3	4.3	3.5									
200. 6. 4 - 12	102.2	52.7	11.8	10.3	9.1	8.1	7.3	6.6	5.4	4.4	3.6	3.0								
200. 6. 5 - 12	125.2	53.5	12.1	10.5	9.3	8.3	7.4	6.7	6.1	5.4	4.5	3.7	3.1							
200. 6. 6 - 12	146.9	54.3	12.3	10.7	9.4	8.4	7.6	6.9	6.2	5.7	5.2	4.4	3.7	3.1						
200. 6. 7 - 12	166.1	55.1	12.5	10.9	9.6	8.6	7.7	7.0	6.3	5.8	5.3	4.9	4.3	3.7	3.1					

HCS 200 + 50 (Topping 50mm) — HCS = fc' 40 MPa, Topping = fc' 30 MPa

HCS	ØMn	ØVcw	Span [m]																
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10,5	11	11,5	12	12,5
200. 6. 4 - 09	67.5	65.7	14.4	11.4	8.7	6.7	5.2	4.0	3.1											
200. 6. 5 - 09	83.7	66.2	14.5	12.6	11.0	9.5	7.2	5.4	4.0											
200. 6. 6 - 09	99.1	66.6	14.6	12.7	11.1	9.9	8.5	6.5	4.9	3.6										
200. 6. 7 - 09	114.2	67.1	14.7	12.8	11.2	9.9	8.9	7.6	5.9	4.5	3.3									
200. 6. 4 - 12	117.3	66.3	14.5	12.6	11.1	9.8	8.8	7.8	6.0	4.6	3.5									
200. 6. 5 - 12	143.7	66.9	14.7	12.7	11.2	9.9	8.9	8.0	7.2	6.0	4.7	3.6								
200. 6. 6 - 12	169.2	67.4	14.8	12.9	11.3	10.0	9.0	8.1	7.3	6.6	5.9	4.7	3.6							
200. 6. 7 - 12	193.6	68.0	14.9	13.0	11.4	10.1	9.1	8.2	7.4	6.7	6.1	5.6	4.5	3.6						

PRODUCT SHAPE & SPECIFICATION ▸ HCS 265



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	1.117,5	--
2	Cgc to Bottom fiber	yb	cm	7,4	10,6
3	Cgc to Top fiber	yt	cm	7,6	9,4
4	Moment of Inertia	Ix	cm⁴	28.987	66.028
5	Concrete Shear Width	bw	cm	34,7	34,7
6	Unit weight of HCS	w	kg/m'	268,2	412,2
7	Joint fill weight	q	kg/m'	13,0	13,0

HCS 265 (No Topping)

HCS = fc' 40 MPa

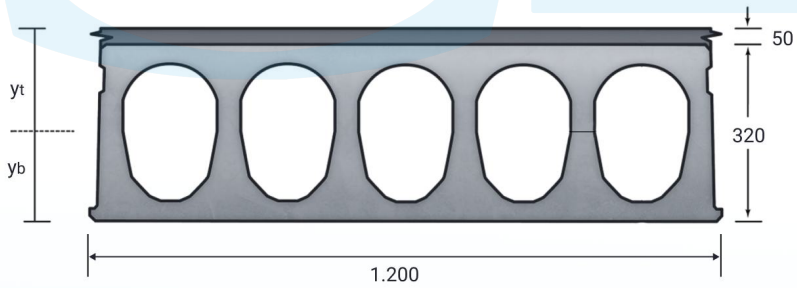
HCS	ØMn	ØVcw	Span [m]																	
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5
265.5. 6 - 09	122.8	79.0	18.1	15.8	13.9	12.4	11.2	9.5	7.8	6.4	5.2	4.3	3.5							
265.5. 8 - 09	160.4	80.5	18.4	16.1	14.2	12.7	11.5	10.4	9.5	8.0	6.7	5.6	4.6	3.8	3.2					
265.5.10 - 09	189.6	79.1	18.1	15.8	13.9	12.5	11.2	10.2	9.2	8.5	7.7	6.5	5.5	4.6	3.8	3.2				
265.5.12 - 09	225.3	80.9	18.5	16.2	14.3	12.8	11.5	10.5	9.5	8.7	8.0	7.4	6.5	5.6	4.7	4.0	3.4			
265.5.14 - 09	252.4	80.5	18.4	16.1	14.2	12.7	11.5	10.4	9.5	8.7	8.0	7.4	6.8	6.2	5.4	4.6	3.9	3.3		
265.5.10 - 12	301.5	78.2	17.8	15.6	13.8	12.3	11.1	10.0	9.1	8.4	7.7	7.1	6.6	6.1	5.6	5.3	4.9	4.3	3.7	3.2

HCS 265 + 50 (Topping 50mm)

HCS = fc' 40 MPa
Topping = fc' 30 MPa

HCS	ØMn	ØVcw	Span [m]																	
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5
265.5. 6 - 09	135.0	93.8	21.0	18.3	16.1	14.4	12.9	10.1	8.2	6.7	5.3	4.1	3.0							
265.5. 8 - 09	176.8	94.9	21.3	18.5	16.3	14.6	13.1	11.8	10.7	9.0	7.2	5.8	4.5	3.5						
265.5.10 - 09	209.6	93.5	20.9	18.2	16.1	14.3	12.8	11.6	10.5	9.6	8.6	7.0	5.7	4.5	3.5					
265.5.12 - 09	248.8	94.9	21.3	18.6	16.3	14.6	13.1	11.8	10.7	9.8	9.0	8.2	7.1	5.8	4.7	3.7				
265.5.14 - 09	279.6	94.5	21.2	18.5	16.3	14.5	13.0	11.7	10.6	9.7	8.9	8.2	7.5	6.7	5.5	4.5	3.6			
265.5.10 - 12	339.6	92.6	20.7	18.0	15.9	14.1	12.7	11.4	10.4	9.5	8.7	8.0	7.3	6.8	6.3	5.8	5.4	4.1	3.3	

PRODUCT SHAPE & SPECIFICATION ▸ HCS 320



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	1.881,2	--
2	Cgc to Bottom fiber	yb	cm	15,7	19,8
3	Cgc to Top fiber	yt	cm	16,3	17,2
4	Moment of Inertia	Ix	cm⁴	243.068	388.344
5	Concrete Shear Width	bw	cm	24,9	24,9
6	Unit weight of HCS	w	kg/m'	451,5	595,5
7	Joint fill weight	q	kg/m'	27,5	27,5

HCS 320 (No Topping)

HCS = fc' 40 MPa

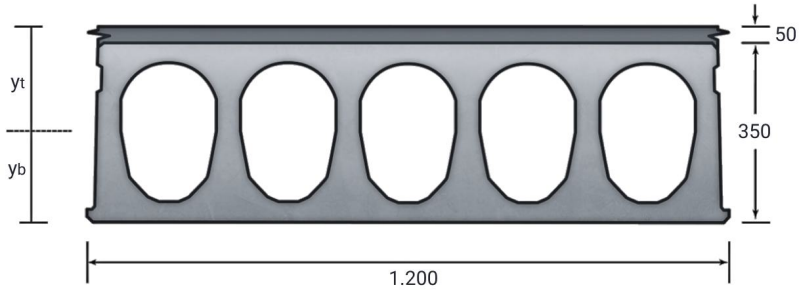
HCS	ØMn	ØVcw	Span [m]																					
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
320.5. 6 - 09	155.1	103.2	23.9	21.0	18.6	16.6	15.0	12.6	10.5	8.7	7.3	6.1	5.1	4.2	3.4									
320.5. 8 - 09	204.6	104.9	24.4	21.3	18.9	16.9	15.3	13.9	12.7	11.0	9.3	7.8	6.6	5.5	4.6	3.9	3.2							
320.5.10 - 09	244.1	103.6	24.0	21.0	18.6	16.7	15.0	13.7	12.5	11.5	10.6	9.1	7.7	6.5	5.5	4.7	4.0	3.3						
320.5.12 - 09	282.8	103.1	23.9	20.9	18.6	16.6	15.0	13.6	12.4	11.4	10.5	9.7	8.8	7.5	6.5	5.5	4.7	4.0	3.4					
320.5.10 - 12	345.5	98.2	22.6	19.8	17.5	15.7	14.1	12.8	11.7	10.7	9.9	9.1	8.5	7.9	7.3	6.6	5.7	4.9	4.2	3.6	3.1			
320.5.12 - 12	407.0	100.0	23.1	20.2	17.9	16.0	14.4	13.1	12.0	11.0	10.1	9.3	8.7	8.1	7.5	7.0	6.6	6.1	5.5	4.8	4.2	3.6	3.1	

HCS 320 + 50 (Topping 50mm)

HCS = fc' 40 MPa
Topping = fc' 30 MPa

HCS	ØMn	ØVcw	Span [m]																					
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
320.5. 6 - 09	164.8	118.9	27.1	23.7	21.0	18.7	15.5	12.7	10.4	8.6	7.1	5.8	4.8	3.8										
320.5. 8 - 09	217.7	120.1	27.4	24.0	21.2	18.9	17.0	15.4	14.1	12.5	10.3	8.4	6.6	5.5	4.4	3.4	3.2							
320.5.10 - 09	260.0	118.7	27.1	23.6	20.9	18.7	16.8	15.2	13.9	12.7	11.6	10.0	8.3	6.8	5.6	4.5	4.0	3.6						
320.5.12 - 09	301.4	118.1	26.9	23.5	20.8	18.6	16.7	15.1	13.8	12.6	11.6	10.7	9.7	8.1	6.7	5.5	4.7	4.5						
320.5.10 - 12	374.1	110.9	25.0	21.8	19.3	17.2	15.4	14.0	12.7	11.6	10.6	9.8	9.0	8.4	7.8	7.0	5.7	5.8	3.9	3.1				
320.5.12 - 12	451.3	112.1	25.4	22.1	19.5	17.4	15.6	14.2	12.9	11.8	10.8	9.9	9.2	8.5	7.9	7.0	7.3	6.8	5.5	4.6	3.8	3.1		

PRODUCT SHAPE & SPECIFICATION ▸ HCS 350



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	2.117,2	--
2	Cgc to Bottom fiber	yb	cm	17,0	21,1
3	Cgc to Top fiber	yt	cm	18,0	18,9
4	Moment of Inertia	Ix	cm⁴	323.554	499.290
5	Concrete Shear Width	bw	cm	25,6	25,6
6	Unit weight of HCS	w	kg/m'	508,1	652,1
7	Joint fill weight	q	kg/m'	30,4	30,4

HCS 350 (No Topping)

HCS = fc' 40 MPa

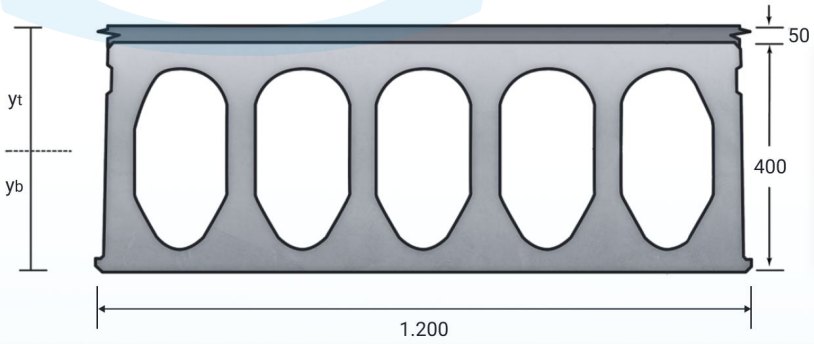
HCS	ØMn	ØVcw	Span [m]																					
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
350.4.10 - 09	229.9	142.2	24.4	21.3	18.8	16.8	15.2	13.7	12.5	11.5	10.2	8.6	7.2	6.0	5.0	4.2	3.4							
350.4. 5 - 12	256.0	155.9	27.1	23.7	21.0	18.8	17.0	15.4	14.1	12.9	11.8	10.0	8.5	7.2	6.1	5.2	4.3	3.6	3.0					
350.4.12 - 09	282.2	144.2	24.8	21.7	19.2	17.1	15.4	14.0	12.7	11.7	10.7	9.9	8.8	7.5	6.3	5.4	4.5	3.8	3.1					
350.4.10 - 12	391.5	145.4	25.1	21.9	19.4	17.5	15.6	14.1	12.9	11.8	10.9	10.7	9.3	8.7	8.1	7.5	6.6	5.7	4.9	4.2	3.5	3.0		
350.4.12 - 12	474.4	147.8	25.5	22.3	19.7	17.6	15.9	14.4	13.2	12.1	11.1	10.2	9.5	8.8	8.2	7.7	7.2	6.7	6.3	5.5	4.8	4.2	3.6	3.1

HCS 350 + 50 (Topping 50 mm)

HCS = fc' 40 MPa
Topping = fc' 30 MPa

HCS	ØMn	ØVcw	Span [m]																					
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5
350.4.10 - 09	246.6	160.0	27.0	23.5	20.7	18.5	16.6	15.0	13.6	12.4	11.3	9.3	7.5	6.1	4.8	3.7								
350.4. 5 - 12	271.2	177.4	30.1	26.3	23.2	21.0	18.9	16.9	15.4	14.1	12.9	11.0	9.1	7.5	6.1	4.9	3.9	3.0						
350.4.12 - 09	301.7	161.4	27.3	23.8	20.9	18.7	16.8	15.2	13.8	12.6	11.5	10.6	9.6	7.9	6.5	5.3	4.2	3.3						
350.4.10 - 12	430.9	162.5	27.5	24.0	21.1	18.8	16.9	15.3	13.9	12.7	11.6	10.7	9.9	9.1	8.5	7.9	7.1	6.0	4.9	4.0	3.3			
350.4.12 - 12	520.0	166.3	28.2	24.6	21.7	19.4	17.4	15.8	14.3	13.1	12.0	11.1	10.2	9.5	8.8	8.2	7.6	7.1	6.6	5.7	4.8	4.0	3.3	

PRODUCT SHAPE & SPECIFICATION ▸ HCS 400



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	2.368,0	--
2	Cgc to Bottom fiber	yb	cm	19,5	23,7
3	Cgc to Top fiber	yt	cm	20,5	21,3
4	Moment of Inertia	Ix	cm⁴	471.645	697.613
5	Concrete Shear Width	bw	cm	28,4	28,4
6	Unit weight of HCS	w	kg/m'	568,3	712,3
7	Joint fill weight	q	kg/m'	34,3	34,3

HCS 400 (No Topping)

HCS = fc' 40 MPa

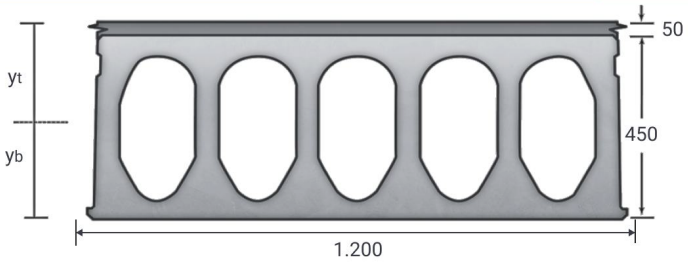
HCS	ØMn	ØVcw	Span [m]																								
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16
400.5.10 - 09	267.8	134.5	34.3	27.4	24.3	21.8	19.7	17.9	16.3	15.0	13.8	12.0	10.3	8.9	7.6	6.6	5.7	4.9	4.2	3.6							
400.5.12 - 09	329.2	136.2	34.6	27.8	24.7	22.1	20.0	18.1	16.6	15.2	14.1	13.0	12.1	11.2	10.2	8.9	7.8	6.8	6.0	5.1	4.4	3.7	3.1				
400.5.14 - 09	389.4	137.9	35.8	28.2	25.0	22.4	20.3	18.4	16.8	15.5	14.3	13.2	12.3	11.4	10.7	10.0	9.4	8.4	7.3	6.4	5.6	4.8	4.2	3.6	3.1		
400.5.10 - 12	459.0	137.4	35.0	28.1	24.9	22.3	20.2	18.3	16.7	15.4	14.2	13.2	12.2	11.4	10.6	9.9	9.3	8.8	8.2	7.6	6.7	5.9	5.1	4.5	3.9	3.3	
400.5.12 - 12	546.5	139.6	35.4	28.6	25.4	22.7	20.5	18.7	17.1	15.7	14.5	13.4	12.5	11.6	10.9	10.2	9.5	9.0	8.4	8.0	7.5	7.1	6.6	5.8	5.2	4.6	4.0

HCS 400 + 50 (Topping 50mm)

HCS = fc' 40 MPa
Topping = fc' 30 MPa

HCS	ØMn	ØVcw	Span [m]																								
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16
400.5.10 - 09	282.7	149.2	31.3	29.9	26.5	23.7	21.3	19.3	17.6	16.2	14.1	12.0	10.2	8.7	7.4	6.3	5.3	4.5	3.7	3.1							
400.5.12 - 09	346.5	150.5	31.8	30.3	26.8	23.9	21.6	19.6	17.8	16.3	15.0	13.9	12.9	11.9	10.1	8.7	7.5	6.5	5.6	4.8	3.9	3.1					
400.5.14 - 09	409.1	155.1	32.2	31.3	27.7	24.8	22.4	20.3	18.5	17.0	15.6	14.4	13.4	12.4	11.6	10.8	10.1	8.5	7.4	6.4	5.4	4.5	3.7	3.0			
400.5.10 - 12	483.3	151.8	32.1	30.6	27.0	24.2	21.8	19.8	18.0	16.5	15.2	14.0	13.0	12.1	11.2	10.5	9.8	9.2	8.6	7.9	6.8	5.8	4.9	4.1	3.3		
400.5.12 - 12	576.5	153.7	32.6	31.0	27.4	24.5	22.1	20.1	18.3	16.8	15.4	14.3	13.2	12.3	11.4	10.7	10.0	9.4	8.8	8.3	7.8	7.3	6.6	5.7	4.9	4.1	3.5

PRODUCT SHAPE & SPECIFICATION ▸ HCS 450



No	Properties	Notation	Unit	No Topping	Topping
1	Area	A	cm²	2.765,0	--
2	Cgc to Bottom fiber	yb	cm	22,5	30,0
3	Cgc to Top fiber	yt	cm	22,5	25,0
4	Moment of Inertia	Ix	cm⁴	676.563	1.254.509
5	Concrete Shear Width	bw	cm	33,0	33,0
6	Unit weight of HCS	w	kg/m'	663,6	951,6
7	Joint fill weight	q	kg/m'	39,9	39,9

HCS 450 (No Topping)

HCS = fc' 40 MPa

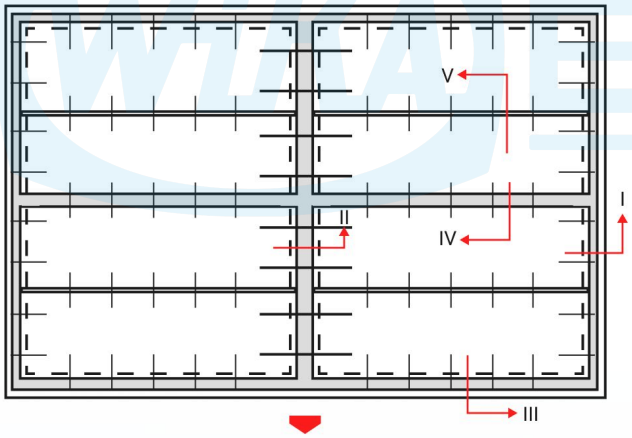
HCS	ØMn	ØVcw	Span [m]																											
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5
450.4.12 - 09	364.3	235.1	41.5	36.4	32.3	29.0	26.2	23.9	21.9	20.1	17.1	16.2	14.2	12.4	10.9	9.6	8.1	7.2	6.3	5.4	4.7	3.9	3.4							
450.4.15 - 09	464.9	241.7	42.9	37.6	33.4	30.0	27.1	24.7	22.4	19.2	17.1	15.0	13.5	12.1	10.9	9.8	9.0	8.2	7.6	6.9	6.4	5.9	5.5	4.7	4.1	3.5				
450.4.10 - 12	508.3	236.8	41.8	36.7	32.6	29.3	26.5	24.1	22.1	20.3	18.8	17.4	16.2	15.1	14.1	13.3	12.5	11.5	10.1	8.9	7.8	6.9	6.0	5.2	4.5	3.9	3.3			
450.4.12 - 12	623.1	240.1	42.5	37.3	33.1	29.7	26.9	24.5	22.4	20.6	19.1	17.7	16.5	15.4	14.4	13.5	12.7	12.0	11.3	10.7	10.1	9.0	8.0	7.1	6.3	5.6	4.9	4.3	3.7	3.2

HCS 450 + 100 (Topping 100 mm)

HCS = fc' 40 MPa
Topping = fc' 30 MPa

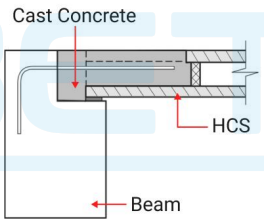
HCS	ØMn	ØVcw	Span [m]																											
	kN.m	kN	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5
400.5.10 - 09	418.7	286.8	49.8	43.6	38.6	34.6	31.2	28.3	25.9	23.7	20.6	17.9	15.5	12.8	11.1	9.5	8.3	7.0	5.7	4.6	3.9									
400.5.12 - 09	531.5	296.8	51.7	45.4	40.2	36.0	32.5	29.5	27.0	24.8	22.9	21.1	19.6	18.3	16.0	14.0	12.2	10.7	8.9	8.2	6.8	5.5	4.4	3.4	4.1					
400.5.14 - 09	586.5	281.5	48.8	42.7	37.8	33.8	30.5	27.7	25.3	23.2	21.4	19.7	18.3	17.0	15.9	14.8	13.9	12.4	10.5	8.8	7.4	6.3	5.1	4.1	4.5					
400.5.10 - 12	715.9	290.6	50.5	44.3	39.2	35.1	31.7	28.8	26.3	24.1	22.2	20.6	19.1	17.8	16.6	15.5	14.5	13.6	12.4	11.5	10.8	9.3	7.9	6.7	6.3	4.5	3.6			

CONNECTION DETAIL

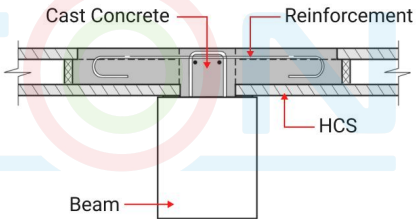


HCS Plan

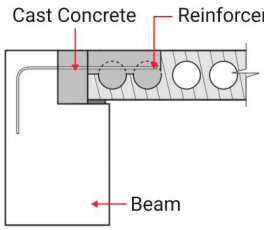
For structur building integrity HCS Joint shoult follow enginering design detail



Section-I



Section-II



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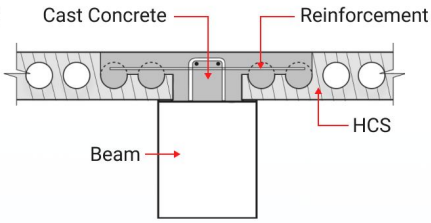

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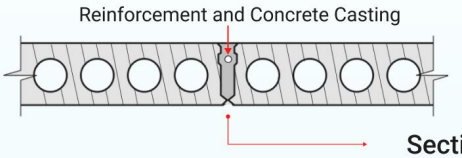
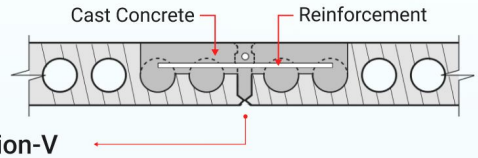
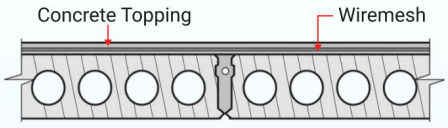


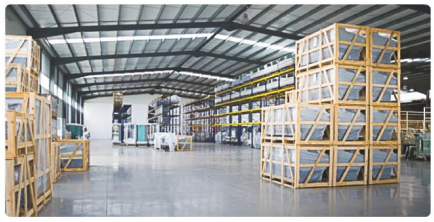


Section-V



Alternative to using Concrete Topping

PRODUCT APPLICATION



Warehouse Floors

Offices and Apartment Floors

Car Park Floors

PRECAST HOUSING

DESCRIPTION

To address the housing backlog, precast house construction has been developed. The precast housing system consists of beam, column, and wall components produced in a factory, then distributed and assembled into house structures. During the design phase of residential structures, it is essential to consider the risk of failure due to earthquakes. This is because Indonesia is an archipelagic country located in a highly active tectonic zone, resulting in a high seismic risk.

The structural components of a house include the foundation, sloof (tie beams), columns (T-shaped & L-shaped), and ring beams made from reinforced concrete. These components are designed to be light enough for workers to lift. Starter bars are installed in the foundation, then the sloof and foundation components are placed and connected by filling grouting material into the holes of the sloof and column components. The connection between columns and ring beams uses plates that link the column and beam components, secured with bolts and nuts.

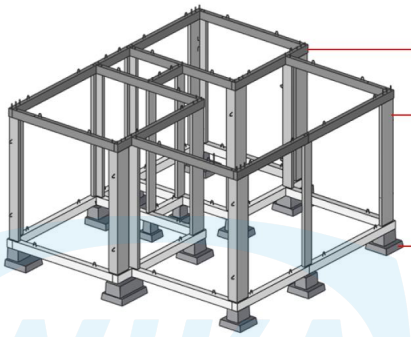
The advantages of the precast housing structure are guaranteed product component quality, faster construction time compared to conventional housing systems, and reliable structural quality.

Design

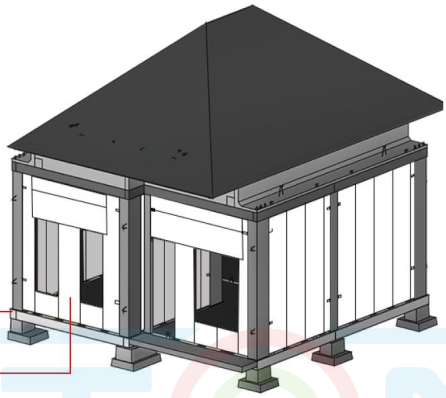
SNI 2847 : 2019	Indonesian Standard Code for Concrete Building Structural
SNI 6880 : 2016	Structural Concrete Spesification

Component Types

RWB.01 (Type 36)



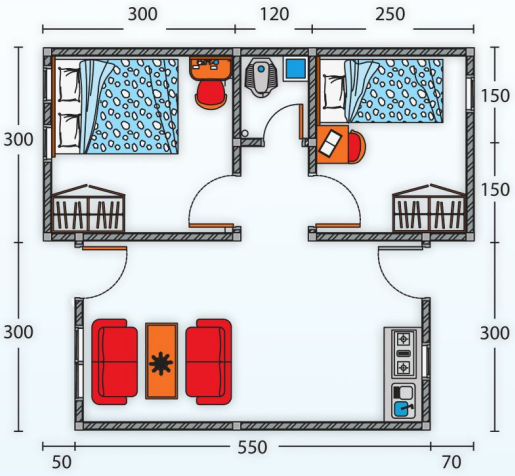
- Beam Component
- Column Component
- Sloof Component
- Foundation Component (Optional)
- Wall Component (Optional)



Wall

Column

Sloof/Beam



Floor Plan RWB.01 (Type 36)

- Living room
- 2 Bedrooms
- Kitchen
- 1 Bathroom

Patent Registered

- ID. S00201909393
- ID. S00201909358
- ID. S00201909352

ADVANTAGES OF WIKA BETON HOUSE

1. Product quality is guaranteed and consistent
2. The installation of components uses a knock-down system so that the installation process is fast.
3. The house is proven to be earthquake resistant.