PRODUCT CATALOG

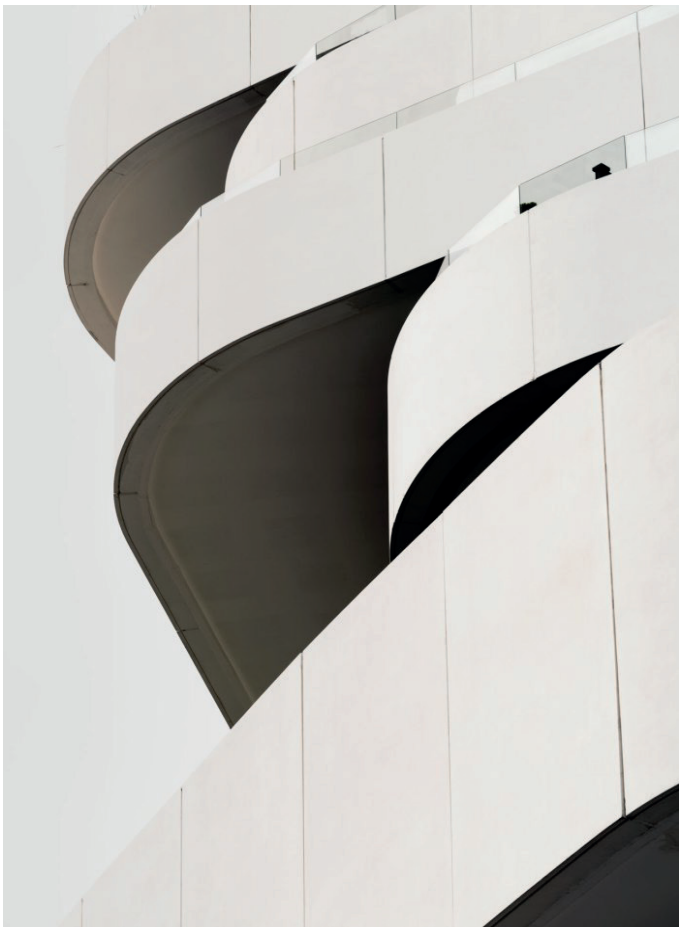
vcon@vconthai.com
www.vconthai.com

GLOBAL VISIONARIES
A WEALTH OF POSSIBILITIES

As an experienced engineer
we know how to bring forward our
clients' imaginations and turn them
into an architectural masterpiece.

OUR HISTORY OF INNOVATION

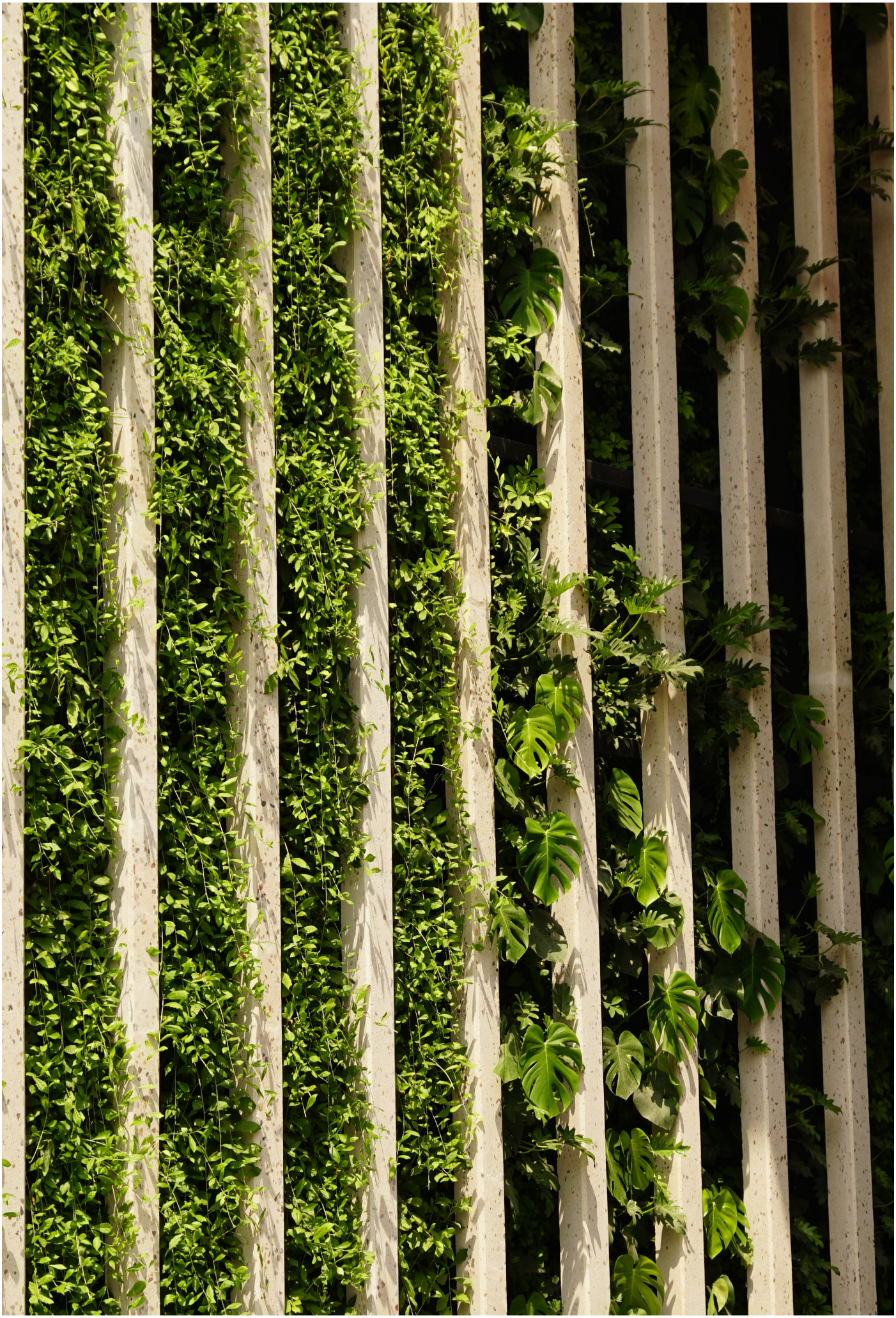
VCON GROUP



Our story began 50 years ago when a group of experienced Thai engineers from the United States created VCON GROUP with the desire to provide durable construction materials in Thailand. Fifty years later VCON became one of Thailand's largest construction companies. Our main inspiration was to develop and upgrade local construction materials with cutting-edge technology. Through extensive research, our VCON Hollow Core Precast Concrete Slab was developed as an alternative product to the Thai construction market. The Hollow Core Precast Concrete is currently the latest technology being used in the United States and we are currently one of the region's largest Hollow Core producers. Since the establishment of our company, VCON's culture has thrived on strong principles, which have been passed by the hands of our managements and workforce from generation to generation. Building strong, long-term relations with our clients is the key to our success as a company.

In the past 50 years, VCON has completed more than 30,000 projects in Asia

VCON is a company known for its innovation, hard work and integrity. It is a company that has been around for over 50 years and is currently ranked one of the largest and top construction firms in Thailand. In addition, VCON has consistently ranked one of the top hollow core suppliers in Thailand. VCON is also a very versatile company obtaining engineers, technicians and operations managers who exhibit expertise to construct a wide range of buildings, such as airports, hotels, warehouse, department stores, as well as many other channeling tasks.



Precast/Prestressed Concrete Institute

TIS. 828-2546

American Concrete Institute

- Production
  TIS 828-2546
  ISO 9001 : 2015

- Transportation
  ISO 9001 : 2015

- Installation
  ISO 9001 : 2015

VCON “Quality” does not end at our factories.
We strive to deliver the best service and the finest products to our customers.

CONTENTS

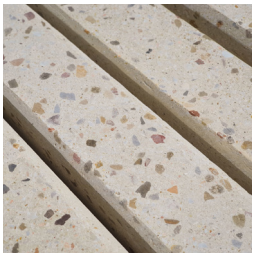
1

hollow core slab

2

hollow core wall panel

3



architectural precast

4

glass fiber reinforced concrete (GFRC)

5

precast beam and column

6

precast concrete gutter

7

wire mesh

8

prestressed concrete pile

HOLLOW CORE SLAB

Lightweight, Sound Insulation,
Heat Resistance and High Efficiency

The most economical and efficient floor system.

Lightweight

A Hollow Core Slab is a precast, pre-stressed concrete with continuous voids. Using this unique slab will not only reduce building costs but will also reduce the overall weight of a structure.

Sound Insulation

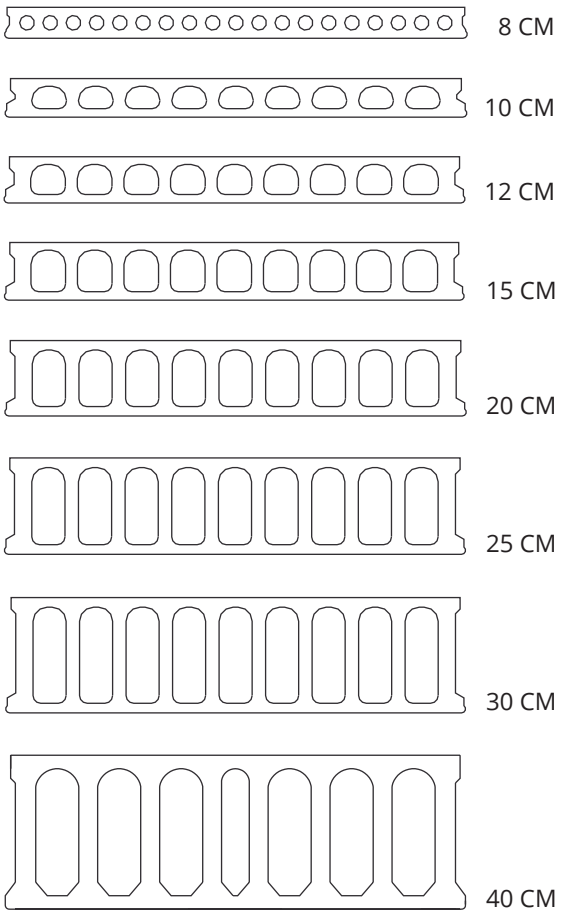
A Hollow Core Slab can reduce transmission of sound waves and temperature. Hollow Core Slabs have excellent sound transmission characteristics associated with concrete. The Sound Transmission Class Rating ranges from approximately 47 to 57 without topping and the Impact Insulation Class Rating starts at approximately 23 for a plain slab and may be increased to over 70.

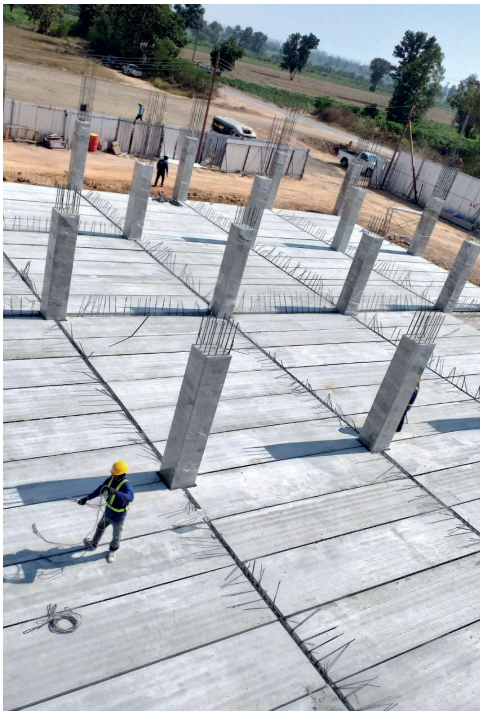
Heat Resistance

Excellent fire resistance is another attribute of the Hollow Core Slab. Depending on thickness and strand cover, ratings up to 4 hours endurance can be achieved.

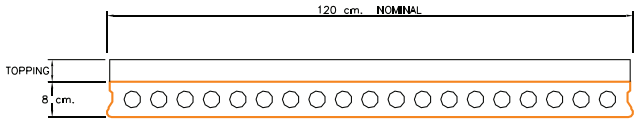
High Efficiency

As an added benefit, the Hollow Core Slabs will eliminate the need to drill the slab for electrical and mechanical runs.





HOLLOW CORE SLAB 8 CM.



SECTION PROPERTIES

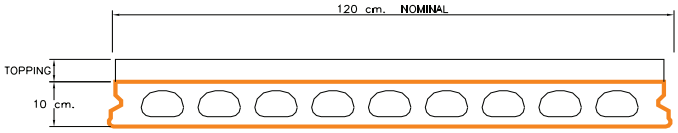
TOPPING	0 CM.	3 CM.	5 CM.
A (cm.^{2})	730	-	-
I (cm.^{4})	4,874	11,283	17,999
Y_b (cm.)	3.96	5.49	6.50
Y_t (cm.)	4.04	5.51	6.50
Z_b (cm.^{3})	1,231	2,055	2,768
Z_t (cm.^{3})	1,205	2,047	2,770
w (kg/m.^{2})	146	221	269
e (cm.)	1.46	2.99	4.01
b_w (cm.)	44.90	44.90	44.90

TOPPING	No. of WIRE	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER												
			2.6	2.8	3	3.2	3.4	3.6	3.8	4	4.2	4.4	4.6	4.8	5
0 cm.	6-Ø 5mm.	937.61	419	348	288	238	197	158							
	7-Ø 5mm.	1,078.50	500	414	345	288	241	201	168						
	8-Ø 5mm.	1,215.25	584	487	409	345	292	247	209	177					
	9-Ø 5mm.	1,347.95	661	554	467	395	337	287	245	210	179				
	10-Ø 5mm.	1,476.69	736	618	523	445	380	326	280	241	208	178	153		
	11-Ø 5mm.	1,601.56	808	680	577	493	423	364	315	272	235	204	177	152	
	12-Ø 5mm.	1,722.65	879	741	630	539	464	401	347	301	262	228	199	172	
	13-Ø 5mm.	1,840.05	947	800	681	584	503	436	379	330	288	252	220	192	168
	14-Ø 5mm.	1,953.83	1,013	857	731	628	542	470	410	358	314	275	241	212	186
3 cm.	6-Ø 5mm.	1,439.41	648	533	440	364	301	249	204	162					
	7-Ø 5mm.	1,653.87	772	645	538	450	379	318	267	211					
	8-Ø 5mm.	1,861.51	898	749	629	530	449	381	322	255	198				
	9-Ø 5mm.	2,062.50	1,014	849	716	607	517	442	371	299	237				
	10-Ø 5mm.	2,257.00	1,127	946	801	682	583	500	420	343	277	219			
	11-Ø 5mm.	2,445.16	1,236	1,041	883	754	647	557	469	387	317	256			
	12-Ø 5mm.	2,627.14	1,342	1,132	962	824	709	612	518	431	357	292	218		
	13-Ø 5mm.	2,803.10	1,444	1,220	1,039	891	768	666	566	475	397	329	269		
	14-Ø 5mm.	2,973.19	1,542	1,305	1,113	956	826	717	615	519	437	365	302	210	
5 cm.	6-Ø 5mm.	1,809.40	823	679	566	471	392	286	195						
	7-Ø 5mm.	2,085.03	983	821	686	576	477	360	260						
	8-Ø 5mm.	2,353.62	1,144	955	804	679	559	433	326	236					
	9-Ø 5mm.	2,615.30	1,295	1,086	918	780	641	506	392	295					
	10-Ø 5mm.	2,870.22	1,443	1,214	1,029	877	723	579	458	354	265				
	11-Ø 5mm.	3,118.49	1,587	1,338	1,137	972	805	652	523	413	319				
	12-Ø 5mm.	3,360.26	1,727	1,459	1,242	1,065	887	725	589	473	372	235			
	13-Ø 5mm.	3,595.66	1,864	1,577	1,345	1,155	969	798	654	532	426	335			
	14-Ø 5mm.	3,824.79	1,997	1,691	1,445	1,243	1,051	871	720	591	480	384	203		

HOLLOW CORE SLAB 10 CM.

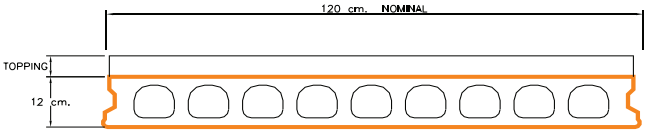
SECTION PROPERTIES

TOPPING	0 CM.	5 CM.
A (cm.^{2})	765	-
I (cm.^{4})	8,864	26,165
Y_b (cm.)	4.99	7.82
Y_t (cm.)	5.01	7.18
Z_b (cm.^{3})	1,778	3,344
Z_t (cm.^{3})	1,767	3,646
w (kg/m.^{2})	153	279
e (cm.)	2.49	5.32
b_w (cm.)	33.40	33.40



TOPPING	No. of WIRE	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER													
			3	3.25	3.5	3.75	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
0 cm.	6-Ø 5mm.	1,307.86	439	355	288	234	190	153								
	8-Ø 5mm.	1,707.96	613	503	416	345	288	240	200	166						
	10-Ø 5mm.	2,091.08	785	650	543	457	386	327	278	237	202	171				
	12-Ø 5mm.	2,457.76	944	786	660	559	476	407	349	301	259	223	192	165		
	14-Ø 5mm.	2,808.53	1,097	917	773	657	562	483	417	362	314	273	238	207	179	155
	16-Ø 5mm.	3,143.91	1,243	1,041	880	750	644	556	482	419	367	321	281	246	216	189
	18-Ø 5mm.	3,464.42	1,383	1,160	983	840	723	626	544	476	417	366	323	284	251	221
5 cm.	6-Ø 5mm.	2,179.77	715	575	468	378	300	243	185							
	8-Ø 5mm.	2,846.61	1,006	822	681	564	467	388	304	219						
	10-Ø 5mm.	3,485.13	1,288	1,064	885	742	624	526	424	327	244	170				
	12-Ø 5mm.	4,096.26	1,555	1,291	1,081	912	774	659	544	435	341	260	166			
	14-Ø 5mm.	4,680.88	1,809	1,508	1,262	1,075	917	786	664	529	438	349	271	156		
	16-Ø 5mm.	5,239.85	2,053	1,715	1,447	1,231	1,054	907	784	650	535	437	351	277		
	18-Ø 5mm.	5,774.04	2,286	1,913	1,618	1,380	1,185	1,023	888	757	632	525	431	350	279	

HOLLOW CORE SLAB 12 CM.



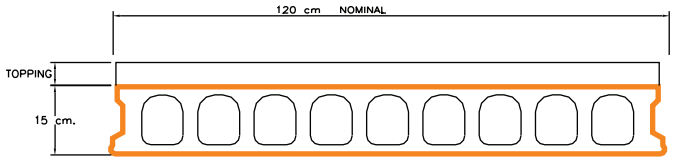
SECTION PROPERTIES

TOPPING	0 CM.	5 CM.
A (cm.^{2})	832	-
I (cm.^{4})	14,467	37,027
Y_b (cm.)	5.99	9.04
Y_t (cm.)	6.01	7.96
Z_b (cm.^{3})	2,414	4,096
Z_t (cm.^{3})	2,407	4,652
w (kg/m.^{2})	166	294
e (cm.)	3.49	6.54
b_w (cm.)	33.40	33.40

TOPPING	No. of WIRE	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER													
			3	3.25	3.5	3.75	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25
0 cm.	6-Ø 5mm.	1,678.51	590	481	396	326	270	223	183	150						
	8-Ø 5mm.	2,201.60	818	676	563	472	398	336	285	241	204	172				
	10-Ø 5mm.	2,707.23	1,042	868	729	618	526	451	387	333	287	248	214	184	158	
	12-Ø 5mm.	3,195.85	1,255	1,049	886	754	646	557	482	418	364	317	277	242	211	184
	14-Ø 5mm.	3,667.89	1,461	1,225	1,037	886	762	659	573	500	438	385	338	298	262	231
	16-Ø 5mm.	4,123.77	1,660	1,394	1,183	1,013	874	758	661	580	510	450	397	352	312	277
	18-Ø 5mm.	4,563.91	1,851	1,557	1,324	1,136	981	854	747	656	579	512	454	404	360	321
5 cm.	6-Ø 5mm.	2,550.36	864	700	569	464	378	307	247	196	153					
	8-Ø 5mm.	3,340.12	1,208	993	822	684	572	478	404	338	281	233	172			
	10-Ø 5mm.	4,101.06	1,545	1,276	1,066	901	763	648	552	470	401	341	268	203		
	12-Ø 5mm.	4,833.97	1,864	1,553	1,305	1,105	943	807	694	598	516	445	364	291	226	170
	14-Ø 5mm.	5,539.64	2,171	1,814	1,531	1,302	1,115	960	830	720	626	546	460	379	307	244
	16-Ø 5mm.	6,218.83	2,467	2,066	1,748	1,492	1,282	1,108	962	839	733	642	557	467	388	318
	18-Ø 5mm.	6,872.29	2,752	2,309	1,957	1,674	1,442	1,249	1,088	952	835	735	648	555	469	393

SECTION PROPERTIES

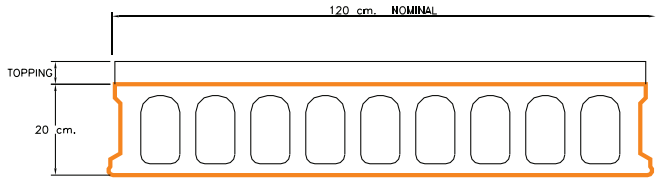
TOPPING	0 CM.	5 CM.
A (cm.^{2})	932	-
I (cm.^{4})	26,029	58,015
Y_b (cm.)	7.50	10.83
Y_t (cm.)	7.50	9.17
Z_b (cm.^{3})	3,470	5,359
Z_t (cm.^{3})	3,470	6,324
w (kg/m.^{2})	186	317
e (cm.)	4.50	7.83
b_w (cm.)	33.40	33.40



TOPPING	No. of STRAND	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER											
			3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5
0 cm.	4-Ø 3/8"	4,140.25	1,650	1,172	861	648	496	383	297	231	178			
	5-Ø 3/8"	5,075.02	2,058	1,471	1,090	829	642	504	399	317	252	200	157	
	6-Ø 3/8"	5,972.05	2,449	1,758	1,310	1,003	783	621	497	401	324	263	212	170
	7-Ø 3/8"	6,832.50	2,823	2,034	1,521	1,169	918	732	591	481	393	323	265	217
	8-Ø 3/8"	7,657.50	3,183	2,298	1,723	1,329	1,048	839	680	557	459	380	316	262
	9-Ø 3/8"	8,448.16	3,527	2,551	1,917	1,482	1,172	942	767	630	522	435	364	305
5 cm.	4-Ø 3/8"	5,784.89	2,255	1,586	1,156	859	646	487	369	265	161			
	5-Ø 3/8"	7,066.58	2,818	2,001	1,470	1,107	847	655	508	386	266	168		
	6-Ø 3/8"	8,287.08	3,349	2,391	1,770	1,343	1,038	813	641	508	370	259	169	
	7-Ø 3/8"	9,448.60	3,855	2,763	2,054	1,568	1,221	963	768	615	475	351	249	
	8-Ø 3/8"	10,553.30	4,337	3,117	2,325	1,782	1,394	1,107	888	718	580	442	329	236
	9-Ø 3/8"	11,603.30	4,794	3,453	2,582	1,986	1,559	1,243	1,002	815	667	533	409	307

TOPPING	No. of WIRE	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER										
			3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8
0 cm.	6-Ø 5mm.	2,142.07	775	528	367	257	178						
	8-Ø 5mm.	2,819.24	1,070	744	533	388	284	207	149				
	10-Ø 5mm.	3,478.58	1,358	955	694	515	387	293	221	165			
	12-Ø 5mm.	4,120.45	1,642	1,165	856	644	493	380	295	229	176		
	14-Ø 5mm.	4,745.20	1,914	1,365	1,009	765	591	461	363	287	226	176	
	16-Ø 5mm.	5,353.17	2,179	1,560	1,158	883	686	540	429	343	275	220	174
	18-Ø 5mm.	5,944.69	2,437	1,749	1,303	998	779	617	494	398	322	261	211
5 cm.	6-Ø 5mm.	3,013.80	1,047	699	473	318	207						
	8-Ø 5mm.	3,957.48	1,458	1,001	704	500	355	247	165				
	10-Ø 5mm.	4,871.86	1,857	1,294	928	677	503	370	269	182			
	12-Ø 5mm.	5,757.63	2,243	1,577	1,150	853	642	485	366	262	159		
	14-Ø 5mm.	6,615.47	2,621	1,856	1,360	1,020	776	596	459	343	228		
	16-Ø 5mm.	7,446.04	2,983	2,122	1,563	1,180	906	704	550	423	298	196	
	18-Ø 5mm.	8,249.99	3,333	2,379	1,760	1,336	1,033	808	637	504	367	257	165

HOLLOW CORE SLAB 20 CM.



SECTION PROPERTIES

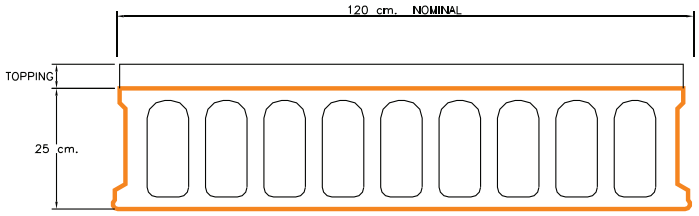
TOPPING	0 CM.	5 CM.
A (cm.^{2})	1,198	-
I (cm.^{4})	58,582	111,229
Y_b (cm.)	10.08	13.55
Y_t (cm.)	9.92	11.45
Z_b (cm.^{3})	5,828	8,209
Z_t (cm.^{3})	5,919	9,713
w (kg/m.^{2})	240	377
e (cm.)	7.08	10.55
b_w (cm.)	37	37

TOPPING	No. of STRAND	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER													
			4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5
0 cm.	4-Ø 3/8"	6,002.02	1,268	960	739	575	451	354	278	216	165					
	5-Ø 3/8"	7,399.55	1,615	1,235	963	761	608	489	394	318	255	203	160			
	6-Ø 3/8"	8,757.61	1,948	1,498	1,176	937	756	615	503	412	338	277	226	182		
	7-Ø 3/8"	10,077.05	2,272	1,753	1,383	1,108	900	737	608	504	419	349	290	240	197	160
	8-Ø 3/8"	11,358.68	2,586	2,002	1,584	1,274	1,039	856	711	594	498	418	352	295	247	206
	9-Ø 3/8"	12,603.33	2,891	2,243	1,779	1,436	1,175	972	811	681	574	486	412	349	296	250
	10-Ø 3/8"	13,811.79	3,123	2,477	1,968	1,592	1,306	1,084	907	765	648	552	471	402	343	293
	2-Ø 1/2"+8-Ø 3/8"	15,671.99	3,122	2,476	2,260	1,824	1,499	1,247	1,046	885	752	640	544	462	392	332
	4-Ø 1/2'+6-Ø 3/8"	17,444.79	3,122	2,476	2,476	1,985	1,670	1,397	1,170	990	847	725	623	536	462	397
5 cm.	4-Ø 3/8"	7,644.69	1,558	1,165	884	676	517	399	301	222						
	5-Ø 3/8"	9,387.33	1,985	1,502	1,162	906	712	560	440	343	264	181				
	6-Ø 3/8"	11,066.19	2,401	1,832	1,425	1,124	894	716	575	461	367	275	188			
	7-Ø 3/8"	12,683.05	2,798	2,145	1,679	1,333	1,071	866	704	573	466	369	272	189		
	8-Ø 3/8"	14,239.62	3,179	2,447	1,923	1,535	1,240	1,011	829	682	562	462	356	265	187	
	9-Ø 3/8"	15,737.62	3,546	2,737	2,158	1,729	1,403	1,150	949	786	653	543	439	340	255	182
	10-Ø 3/8"	17,178.71	3,783	3,015	2,384	1,916	1,560	1,284	1,064	887	732	588	467	365	277	202
	2-Ø 1/2"+8-Ø 3/8"	19,370.06	3,783	3,015	2,727	2,190	1,789	1,477	1,229	1,030	866	712	575	460	361	276
	4-Ø 1/2'+6-Ø 3/8"	21,426.44	3,783	3,015	2,959	2,389	2,013	1,668	1,394	1,173	993	842	700	572	462	368

HOLLOW CORE SLAB 25 CM.

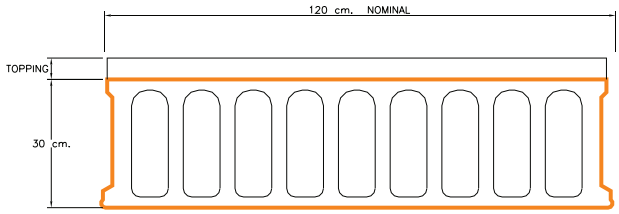
SECTION PROPERTIES

TOPPING	0 CM.	5 CM.
A (cm.^{2})	1,385	-
I (cm.^{4})	104,761	183,202
Y_b (cm.)	12.58	16.33
Y_t (cm.)	12.42	13.67
Z_b (cm.^{3})	8,327	11,221
Z_t (cm.^{3})	8,435	13,399
w (kg/m.^{2})	277	419
e (cm.)	9.58	13.33
b_w (cm.)	37	37



TOPPING	No. of STRAND	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER																
			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
0 cm.	4-Ø 3/8"	7,865.54	1,695	1,290	1,001	787	624	497	396	315	249	194	148						
	5-Ø 3/8"	9,727.47	2,156	1,655	1,297	1,032	831	674	550	450	367	299	242	194	153				
	6-Ø 3/8"	11,548.96	2,602	2,008	1,583	1,269	1,029	843	696	577	479	398	331	273	224	182			
	7-Ø 3/8"	13,330.68	3,039	2,353	1,862	1,500	1,224	1,009	839	701	588	495	417	351	294	246	203	167	
	8-Ø 3/8"	15,073.27	3,466	2,690	2,136	1,725	1,413	1,170	978	822	695	590	501	426	362	308	260	218	182
	9-Ø 3/8"	16,777.38	3,466	2,887	2,403	1,946	1,599	1,329	1,114	941	799	682	584	500	428	363	306	256	213
	10-Ø 3/8"	18,443.66	3,466	2,887	2,556	2,162	1,780	1,483	1,247	1,057	902	772	664	570	487	416	355	301	254
	2-Ø 1/2" +8-Ø 3/8"	21,032.46	3,466	2,887	2,556	2,408	1,987	1,724	1,455	1,238	1,060	911	783	674	581	502	432	372	319
	4-Ø 1/2" +6-Ø 3/8"	23,528.57	3,466	2,887	2,556	2,408	1,987	1,879	1,625	1,380	1,183	1,015	880	764	662	574	497	430	371
5 cm.	4-Ø 3/8"	9,495.46	1,977	1,489	1,139	881	684	531	410	312	232	165							
	5-Ø 3/8"	11,712.20	2,517	1,915	1,485	1,166	924	736	591	471	372	290	221	163					
	6-Ø 3/8"	13,852.33	3,041	2,326	1,825	1,449	1,162	939	762	620	503	406	325	256	182				
	7-Ø 3/8"	15,928.49	3,554	2,736	2,150	1,717	1,388	1,132	928	764	630	518	425	346	267	190			
	8-Ø 3/8"	17,942.13	4,046	3,124	2,466	1,978	1,607	1,318	1,089	904	753	628	523	434	352	267	193		
	9-Ø 3/8"	19,894.65	4,046	3,368	2,772	2,231	1,819	1,499	1,245	1,040	872	733	609	489	386	298	221	154	
	10-Ø 3/8"	21,787.47	4,046	3,368	2,959	2,476	2,025	1,675	1,396	1,172	988	836	707	577	466	370	287	214	151
	2-Ø 1/2" +8-Ø 3/8"	24,695.09	4,046	3,368	2,959	2,761	2,265	1,935	1,629	1,365	1,156	983	839	700	575	465	374	292	221
	4-Ø 1/2" +6-Ø 3/8"	27,458.93	4,046	3,368	2,959	2,761	2,558	2,127	1,840	1,555	1,324	1,132	971	835	701	581	478	388	308

HOLLOW CORE SLAB 30 CM.



SECTION PROPERTIES

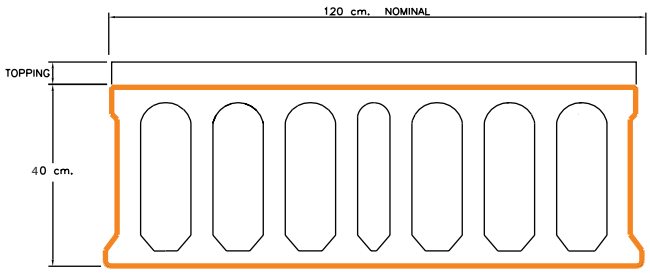
TOPPING	0 CM.	5 CM.
A (cm.^{2})	1,570	-
I (cm.^{4})	168,163	277,824
Y_b (cm.)	15.09	19.07
Y_t (cm.)	14.91	15.93
Z_b (cm.^{3})	11,143	14,572
Z_t (cm.^{3})	11,279	17,436
w (kg/m.^{2})	314	461
e (cm.)	12.09	16.07
b_w (cm.)	37	37

TOPPING	No. of STRAND	Ø Mn (kg-m.)	SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M) SIMPLE SPAN IN METER																
			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
0 cm.	4-Ø 3/8"	9,729.84	2,121	1,621	1,263	998	796	640	515	415	333	265	207	159					
	5-Ø 3/8"	12,056.91	2,692	2,071	1,628	1,299	1,050	856	701	577	475	391	320	260	209	165			
	6-Ø 3/8"	14,342.92	3,257	2,519	1,991	1,600	1,303	1,072	889	741	620	519	435	364	303	251	206	166	
	7-Ø 3/8"	16,588.42	3,807	2,954	2,343	1,891	1,548	1,281	1,069	897	757	641	544	462	391	331	279	233	193
	8-Ø 3/8"	18,793.95	4,347	3,381	2,689	2,177	1,788	1,485	1,245	1,051	893	761	651	558	478	409	350	298	253
	9-Ø 3/8"	20,960.04	4,347	3,632	2,893	2,346	2,024	1,686	1,418	1,202	1,026	879	756	652	563	486	419	357	302
	10-Ø 3/8"	23,087.22	4,347	3,632	3,226	2,621	2,161	1,884	1,589	1,350	1,156	994	859	744	646	556	477	411	352
	2-Ø 1/2" +8-Ø 3/8"	26,410.95	4,347	3,632	3,226	2,946	2,523	2,112	1,840	1,569	1,346	1,161	1,006	875	759	657	570	493	426
	4-Ø 1/2" +6-Ø 3/8"	29,638.55	4,347	3,632	3,226	2,946	2,523	2,321	2,030	1,794	1,544	1,336	1,158	1,005	875	763	666	581	507
5 cm.	4-Ø 3/8"	11,369.72	2,402	1,817	1,399	1,089	854	671	525	408	312	232	166						
	5-Ø 3/8"	14,039.29	3,056	2,334	1,818	1,435	1,145	918	739	594	476	323	300	230	170				
	6-Ø 3/8"	16,642.26	3,694	2,838	2,226	1,773	1,428	1,160	952	780	640	523	426	343	272	212	155		
	7-Ø 3/8"	19,179.89	4,316	3,330	2,628	2,106	1,709	1,400	1,155	957	795	661	548	453	372	302	239	167	
	8-Ø 3/8"	21,653.42	4,927	3,809	3,012	2,427	1,979	1,630	1,353	1,129	947	795	668	561	469	390	322	244	175
	9-Ø 3/8"	24,064.05	4,927	4,112	3,254	2,623	2,241	1,853	1,546	1,298	1,094	926	785	665	558	450	356	275	203
	10-Ø 3/8"	26,413.01	4,927	4,112	3,626	2,927	2,398	2,071	1,734	1,461	1,238	1,053	899	768	652	536	434	346	269
	2-Ø 1/2" +8-Ø 3/8"	30,045.84	4,927	4,112	3,626	3,296	2,793	2,323	2,010	1,700	1,448	1,237	1,061	912	785	662	545	449	360
	4-Ø 1/2" +6-Ø 3/8"	33,528.61	4,927	4,112	3,626	3,296	3,074	2,557	2,216	1,940	1,661	1,427	1,230	1,064	922	798	673	563	466

HOLLOW CORE SLAB 40 CM.

SECTION PROPERTIES

TOPPING	0 CM.	7.5 CM.
A (cm. ^{2})	2,318	-
I (cm.^{4})	437,534	800,118
Y_b(cm.)	20	26.51
Y_t (cm.)	20	20.99
Z_b(cm. ^{3})	21,874	30,179
Z_t (cm. ^{3})	21,879	40,014
e (cm.)	16.30	22.81
b_w(cm.)	40	40
w (kg/m. ^{2})	464	676.67



SAFE SUPERIMPOSED SERVICE LOADS (KGS/SQ.M)

TOPPING	No. of STRAND	Ø Mn (kg-m.)	SIMPLE SPAN IN METER																					
			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	18
0 cm.	8Ø12.7	44,426.79	2,401	2,216	2,001	1,740	1,520	1,331	1,169	1,029	907	799	704	620	545	478								
	2Ø15.2 +6Ø12.7	48,515.05	2,401	2,216	2,054	1,910	1,697	1,492	1,315	1,162	1,028	910	807	715	633	560	494	435						
	4Ø15.2 +4Ø12.7	52,430.18	2,401	2,216	2,054	1,910	1,783	1,645	1,454	1,288	1,144	1,017	905	806	717	638	567	503	445					
	6Ø15.2 +2Ø12.7	56,176.20	2,401	2,216	2,054	1,910	1,783	1,669	1,566	1,410	1,255	1,119	999	893	798	713	637	568	506	450	398			
	8Ø15.2	59,757.11	2,401	2,216	2,054	1,910	1,783	1,669	1,566	1,472	1,361	1,217	1,089	976	875	785	704	631	565	505	450	400		
	4Ø15.2 +6Ø12.7	61,109.19	2,401	2,216	2,054	1,910	1,783	1,669	1,566	1,472	1,388	1,253	1,123	1,007	904	812	729	654	587	525	469	418		
	12Ø12.7	62,437.00	2,401	2,216	2,054	1,910	1,783	1,669	1,566	1,472	1,388	1,290	1,156	1,038	933	838	754	677	608	546	489	436	389	
	6Ø15.2 +4Ø12.7	64,467.18	2,401	2,216	2,054	1,910	1,783	1,669	1,566	1,472	1,388	1,310	1,207	1,085	976	879	792	713	641	577	518	464	415	369
7.5 cm.	8Ø12.7	51,867.50	3,057	2,619	2,256	1,952	1,695	1,475	1,286	1,122	979	853	743	645	557	479	408	345	265					
	2Ø15.2 +6Ø12.7	56,525.95	3,376	2,900	2,505	2,178	1,897	1,658	1,452	1,273	1,117	980	860	753	657	572	495	426	355	275				
	4Ø15.2 +4Ø12.7	61,050.73	3,680	3,175	2,750	2,395	2,094	1,835	1,613	1,420	1,251	1,104	973	858	755	662	580	505	437	359	280			
	6Ø15.2 +2Ø12.7	65,444.72	3,994	3,440	2,990	2,609	2,285	2,000	1,769	1,562	1,382	1,223	1,083	960	849	750	662	582	509	443	360	250		
	8Ø15.2	69,719.13	4,290	3,700	3,205	2,810	2,470	2,175	1,921	1,701	1,508	1,340	1,191	1,059	941	836	741	656	579	509	445	360	285	
	4Ø15.2 +6Ø12.7	71,357.70	4,332	3,800	3,305	2,890	2,540	2,239	1,979	1,754	1,557	1,384	1,232	1,097	976	869	772	685	606	534	469	385	310	
	12Ø12.7	72,980.94	4,515	3,900	3,390	2,965	2,610	2,303	2,037	1,806	1,605	1,428	1,273	1,134	1,011	901	802	713	632	510	492	415	339	235
	2Ø15.2 +10Ø12.7	77,075.56									1,726	1,540	1,375	1,229	1,099	983	879	784	699	622	551	487	428	374

VCON pushed the boundaries of what a hollow core slab can do. Experience the longest hollow core slab in Asia.

IKEA Bangyai

The largest IKEA store in Southeast Asia

Over 60,000 square meters of VCON Holow Core Slabs were installed at IKEA Bangyai, the largest IKEA store in South East Asia, this project took 3 months to complete.

HOLLOW CORE WALL PANEL

Lightweight, Fast Installation, World-Class Technology, Unlimited Design Possibilities

Durable and versatile, precast panels at a fraction of the weight with countless benefits.

VCON hollow core wall panel is a precast, pre-stressed concrete with continuous voids. Using this unique wall will not only reduce building costs but will also reduce the overall weight of a structure. As an added benefit, the hollow core walls will eliminate the need to drill the slab for electrical and mechanical runs.

WALL SYSTEMS COMPARISON

BRICK MASONRY SYSTEM

Not as strong as precast materials
Labor intensive.
Brick masonry needs plastering done to finish a project which can raise construction costs.
Efflorescence, cracking of concrete surface due to poor plastering skill.

SOLID WALL

Solid wall consumed 30% more concrete than hollow core wall, which leads to higher cost
Solid precast concrete walls are heavy and large, which resulted in higher building foundation costs.
Not as strong and durable as VCON hollow core wall Sealant is necessary.

Speed

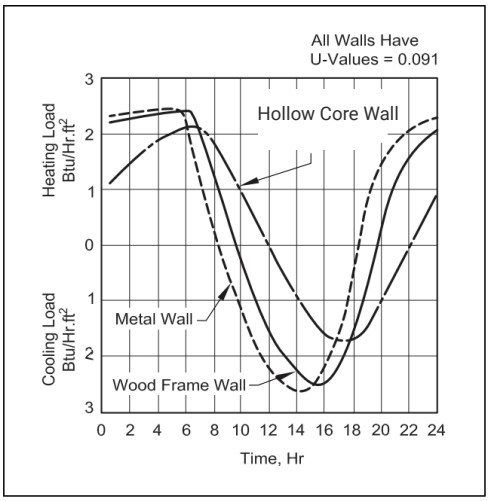
VCON hollow core wall panels are delivered to your construction site install-ready. Acting as a building's complete envelope, including insulation, a moisture barrier and interior finish.

VCON hollow core wall panels have the potential to be erected in significantly less time than traditional cast in place.

Moreover, VCON hollow core wall panels can also help increase a project's vulnerability to unforeseen factors, such as poor weather condition and worksite accidents. By taking advantage of our controlled environment production, your are guaranteed quality, cost reduction, and speedy installation.

Energy Efficiency

Due to the hollow core wall's high thermal mass, the property that enables materials to absorb, store and release heat, it possesses the ability to efficiently transfer large amounts of heat. Important to all, but especially in Southeast Asia, VCON hollow core wall panels keep buildings cool in the summer.



■ Heating and cooling load comparison

Seismic Resistance

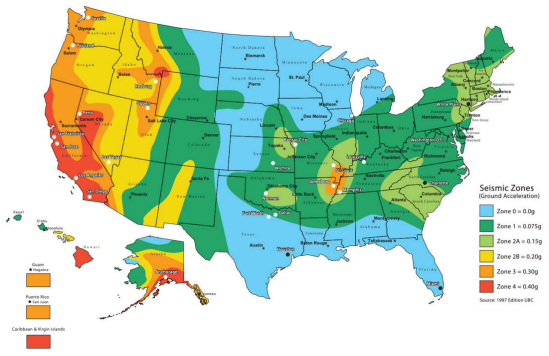
UC San Diego
JACOBS SCHOOL OF ENGINEERING

A team of engineers tested a hollow core building on the world's largest outdoor seismic shake table at the University of California San Diego. The results of this study showed that hollow core precast concrete damage was minimal (cosmetic damage) even after subjecting of intensity 50% higher than Zone 4 level input motion.

Fire Resistance

When it comes to fire resistance, VCON hollow core wall is far above other common building materials. Depending on thickness, ratings up to 4 hours endurance can be achieved.

United States Seismic Zones Map



Sustainability

Sustainability and environmental friendliness are extremely important to us.
With controlled environment production and install-readiness,
VCON hollow core wall panels present the following reductions to a project's impact on the environment.

Reduce amount of cement and water needed for production
No need for on-site storage space
Minimal debris and site disturbance
Reduced labor and material, reduced waste

Low Maintenance

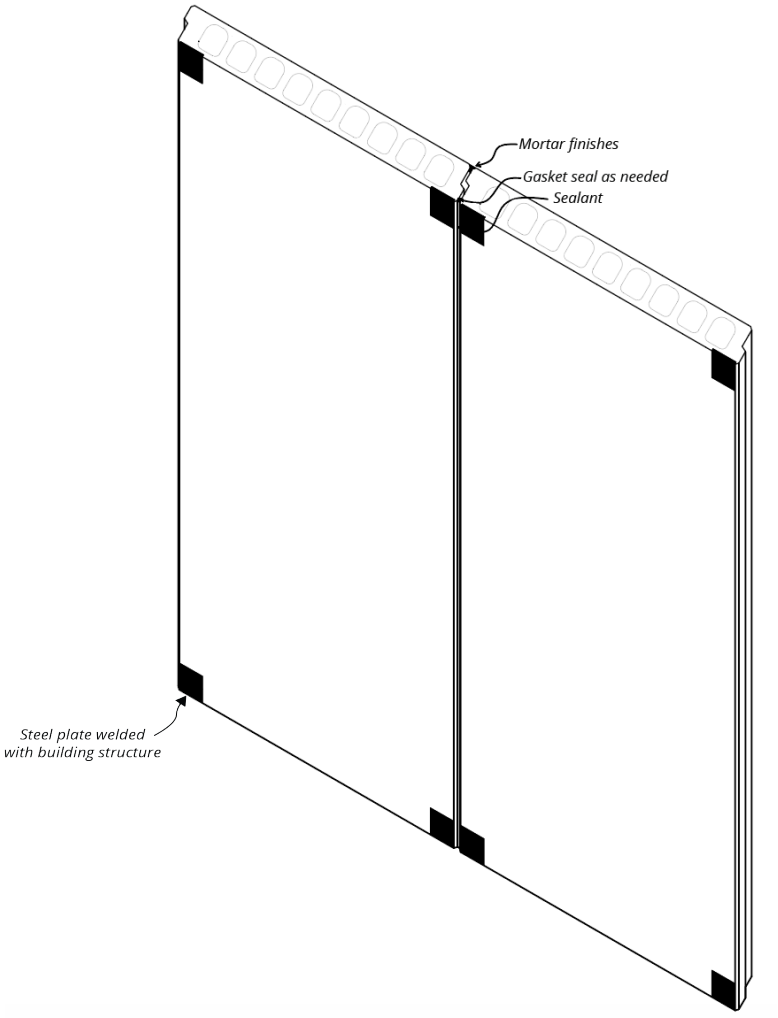
With quality control at the forefront of VCON's precast concrete production,
VCON wall panels are nearly maintenance free building components.
With minimum maintenance comes reduced labor and repair costs

High Sound Resistance

VCON hollow core panels are superior to all other wall alternatives.
This feature proves extremely desirable in building such as schools, warehouses, shopping mall and offices.

Hollow core wall finishes and textures

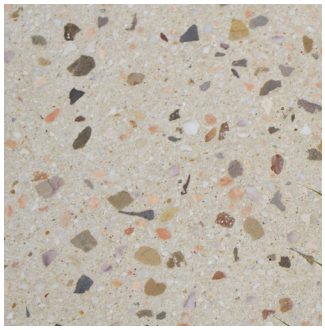
For your vision truly come to life, aesthetic versatility is essential. While precast concrete itself brings unparalleled strength, durability, resilience, and cost savings to any construction project, precast concrete finishes and textures allow aesthetic creativity to seal the show. By combining color, exposure, texture, aggregate grade and sand type, a custom finish gives you a precast concrete structure the unique look it needs to standout.



Textures

concrete finish

acid-etched



polished

concrete rib

sandblasted-rib

bushhammered-rib

polished rib

exposed aggregate

Terrazzo texture

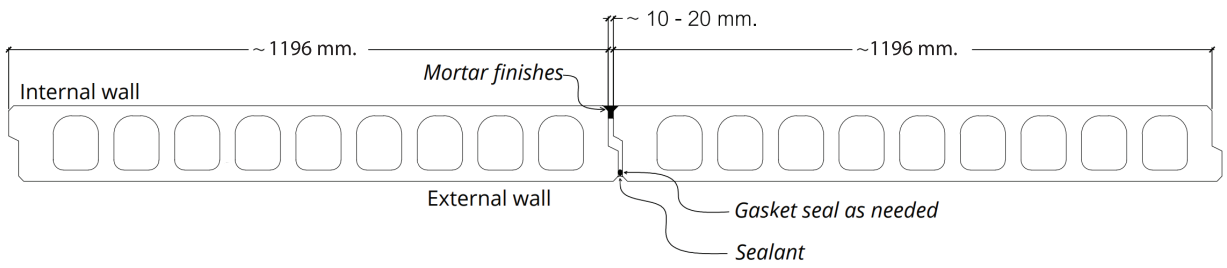
VCON HOLLOW CORE WALL PANEL SPECIFICATIONS

Available thickness	11.5 cm	13.5 cm	16.5 cm	21.5 cm
Available width	1.2 m	1.2 m	1.2 m	1.2 m
Available length	1-4 m	4-5.5 m	5.5-7 m	7-12 m
*Approximate weight per square meter	180 kg	193 kg	213 kg	267 kg

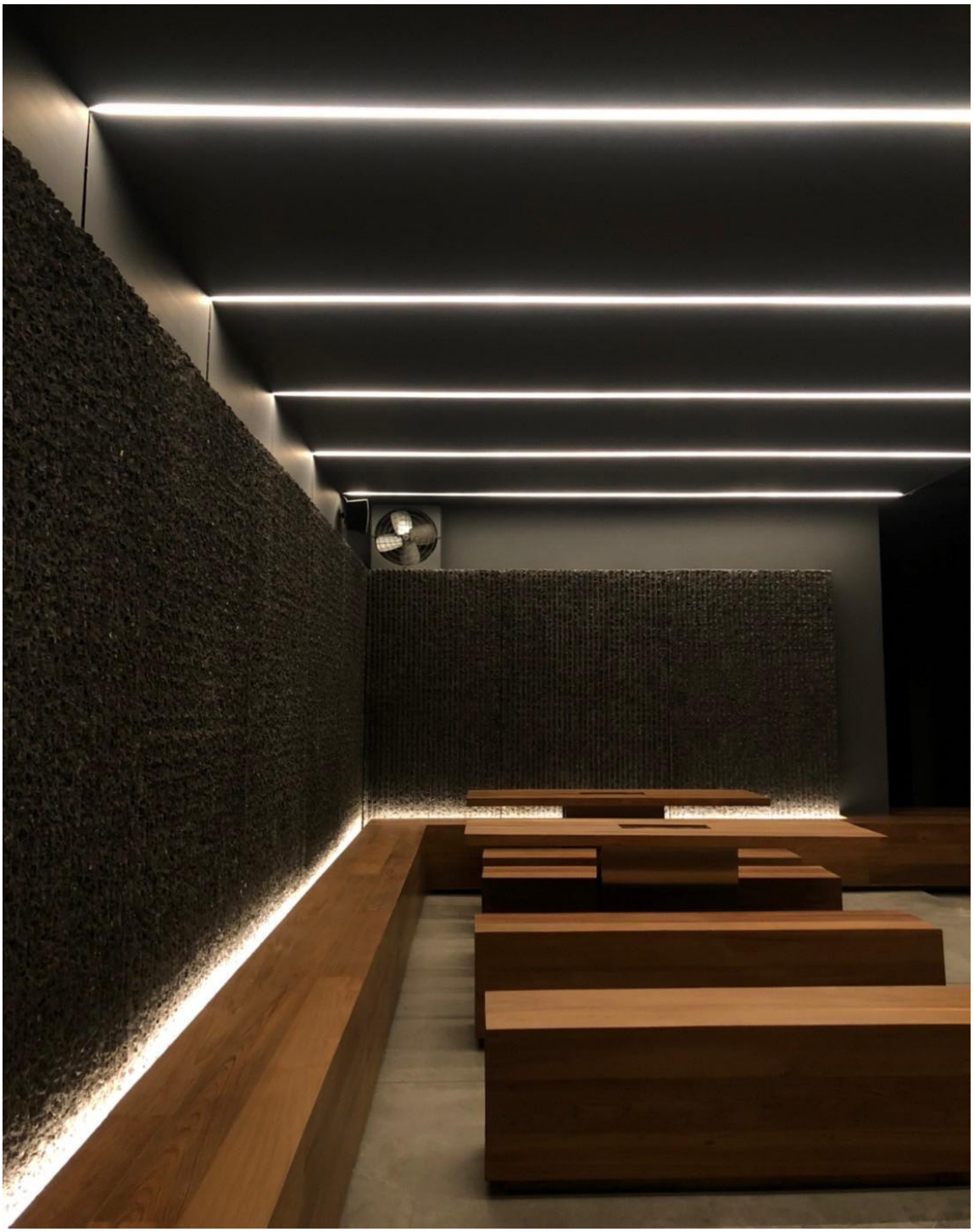
*Note : Weight/ m^2 from calculation

COMPARISON TABLE

EXTERIOR WALL	BRICK MASONRY	SOLID PRECAST CONCRETE WALL PANEL	VCON HOLLOW CORE WALL PANEL
Construction speed	5-10 m^2/ day	50-100 m^2/day	50-100 m^2/day/team
Length	3 m	4 m	12 m
Thickness	10 cm	10-20 cm	11.5 - 21.5 cm
Concrete strength	20-35 ksc	350 ksc	400 ksc
Fire resistance	0.5-2 h	2 h	2-4 h
Weight (10cm thick wall)	180 kg/m^2	240 kg/m^2	180 kg/m^2



Hollow core wall panel - vertical joint design



Project ： Roast8ry Lab

Location ： Chiang Mai

Wall panel texture ： Bushhammered rib in black

Designer ： Arnon Thitipasert, Pitipong Amornwiratanaskul

Project ： Canteen

Location ： Nakorn Pathom

Wall panel texture ： Bushhammered rib in beige

Designer ： Skarn Chaiyawat

ARCHITECTURAL PRECAST

Architectural Precast is an extremely refined concrete building product known for its structural performance, durability, economic and versatility of design. VCON architectural precast can be produced and installed very quickly. Moreover, it can be made with any finish. VCON architectural precast will ensure optimum product quality and appearance at a minimum installed-construction cost.

Putting the best minds together to push the creative
and technical limits of what is possible.

Terrazzo precast pile

Everything VCON creates is the result of an interdisciplinary collaboration between designers, artisans, craftsmen, engineers, and architects from around the world who believe that functional surfaces can be important and ground-breaking works of art.

With a fresh, holistic approach to every facet of manufacturing, VCON has narrowed the gaps between idea and finished product, designer and manufacturer, cutting-edge technology and traditional craftsmanship.

Terrazzo rib wall panel

Lom Hai Jai Tranquil, a luxury townhome located in East Bangkok was designed to be a unique art piece of architecture. The chosen facade material, polished rib colored concrete with exposed multi-colored aggregates, echoe brutalist architectural masterpieces added to the timeless home design. Timeless design not only lives in harmony with its surroundings, it also responds to it. VCON terrazzo rib wall comes in the form of fabricated panels- a construction technique that saves time significantly as well as reduced construction costs.

The design of dark gray terrazzo rib creates a different atmosphere at different times of day.

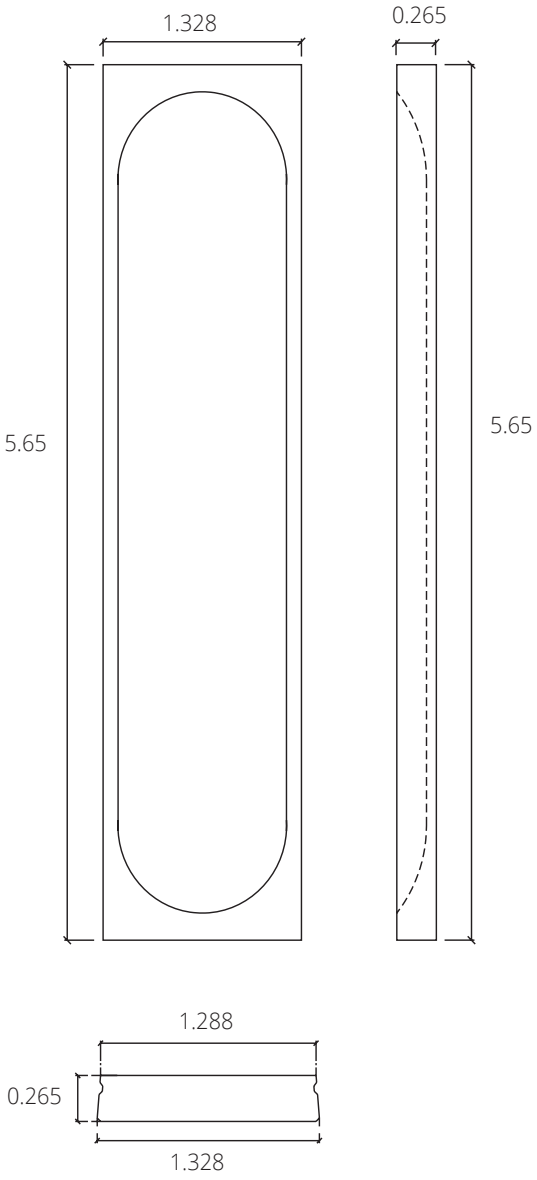
Curved precast ceiling: the future of precast concrete structure

VCON curved precast ceiling is an innovative structural ceiling with all the quality and efficiency advantages of precast manufacture, together with the engineering benefits of ceiling and load bearing floor.

The development of the curved precast ceiling is complex and requires precision. This, in part, is offset by the savings of using a precast system by reducing installation time.

The curved precast ceiling provides fixing positions for lighting in the design. Light bounces off the precast ceilings, deep into the office, reducing artificial lighting needs.

Curved precast ceiling



Standard width : 1.328 m

Length : 5.65 m

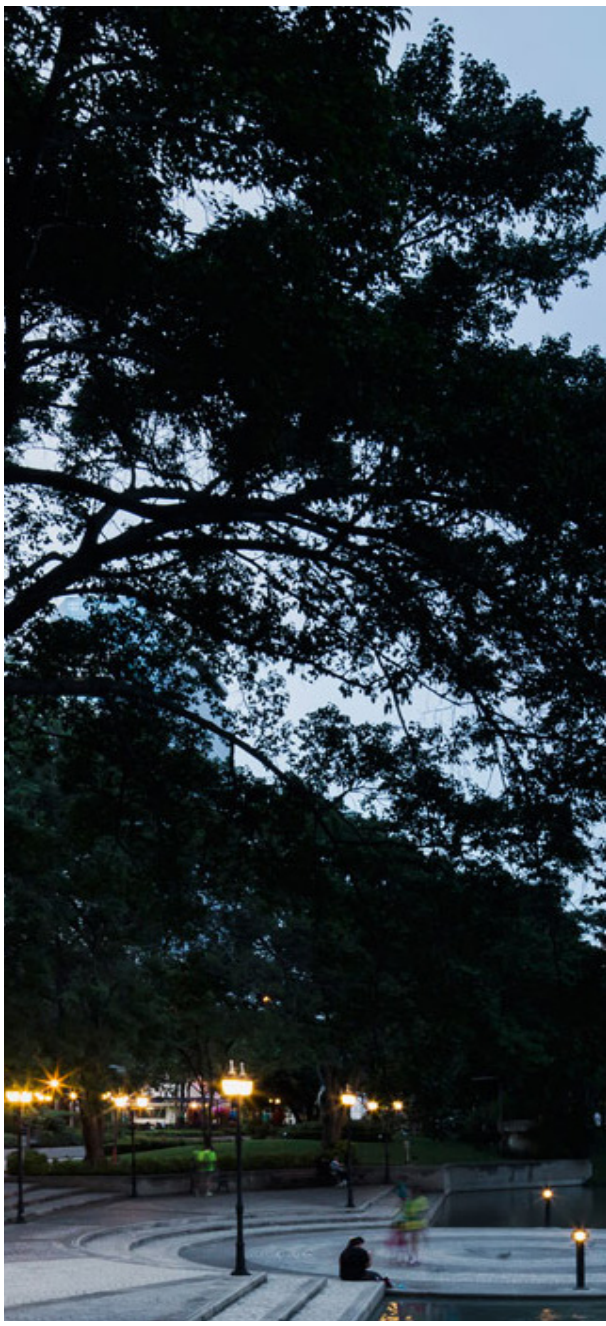
MAX Thickness : 26.5 cm

MIN Thickness : 6.6 cm

Bearing Length : 7.5 cm

MAX Live Load : 300 kg/m2

GLASS FIBER REINFORCED CONCRETE (GFRC)



GFRC is one of the most popular and innovative building materials currently used throughout North America, Europe and the Middle East. GFRC is primary used as an exterior façade for both new or restoration of existing building façade. GFRC panel is lightweight, durable and provides tremendous design flexibility. GFRC panels help reduce cost of the foundation, and structural framing needed to support multi-story buildings. This enables the owner to reduce overall construction costs and accelerate schedules without sacrificing the durability or the architectural aesthetic of precast concrete fabrication.

Lightweight, durable and provides tremendous design flexibility

GFRC Leader

VCON has earned an industry wide reputation for its ability to manage and deliver on large GFRC projects anywhere in Thailand. Our team has extensive experience in the GFRC industry and the design, engineering, production and installation of GFRC panels.

The EmQuartier

VCON was awarded the most sophisticated glass fiber reinforced concrete project in Thailand in 2013 for EmQuartier.

EmQuartier is a new mixed-use 530,000 square meters mall in Bangkok. This is a mall unlike any you have seen before. A gleaming multi-level spiral structure of glass and curved VCON white glass fiber reinforced concrete (GFRC) with flashes of greenery and landscape features. There is a 40 meters waterfall, a rainforest chandelier and open-air floating gardens.


EMPORIO
EM2QUA

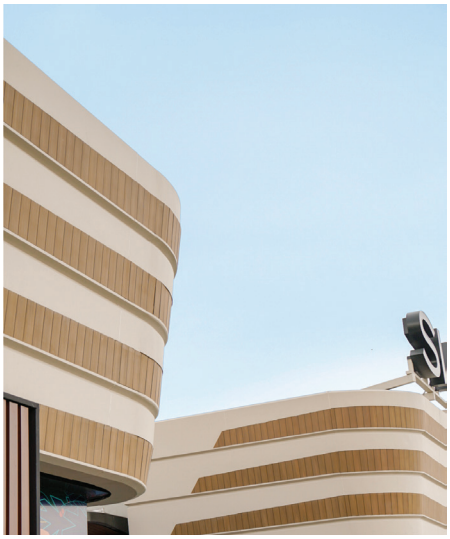
Highly durable and safe

Design freedom. GFRC can be molded into almost any shape and color. This allows architects more freedom in color, shape and texture with other materials.

Requires very low maintenance Economical, GFRC is light compared to traditional concrete or other ornaments.

It is relatively easy and quick to install.


SIAM PREMIUM OUTLETS
BANGKOK

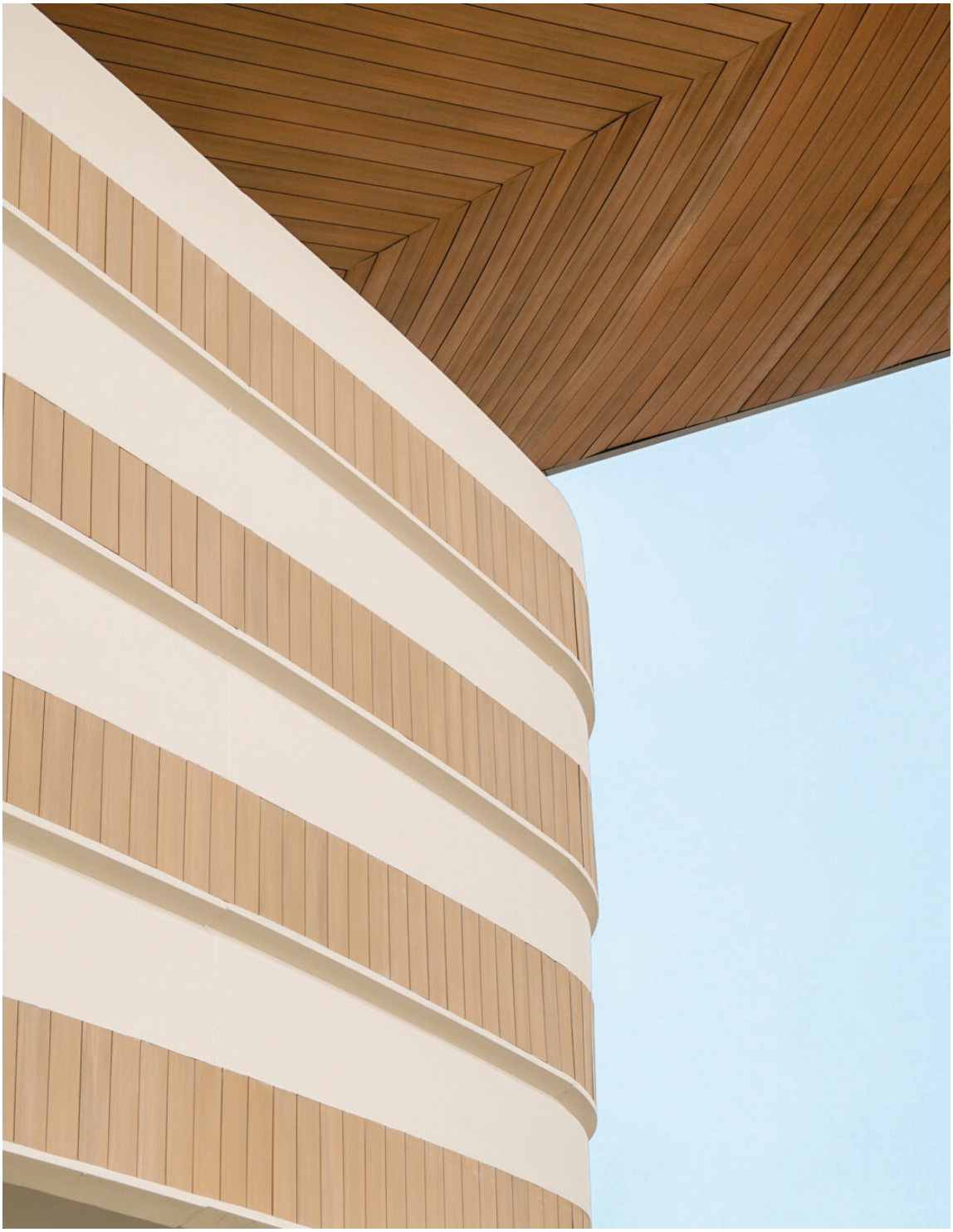


Siam Premium Outlets

VCON is proud to be a part of Simon Property's first venture into Bangkok, Thailand market. The designers wanted materials of the luxury outlet to evoke a direct connection with the surrounding landscape, while providing a lasting structure that reflects the Thai culture. VCON GFRC (Glass Fiber Reinforced Concrete) was chosen for its durability, the natural variations and beauty exhibited in each specific panel.

This project is beautiful, modern façade that is a unique example of the function and attractiveness of glass fiber reinforced concrete. The outlet was opened on June 23rd, 2020, marking the arrival of Thailand's first Premium Outlets, bringing the world's most popular brand of outlet shopping to the country.

Siam Premium Outlets Bangkok is developed by Siam Piwat Simon, a joint venture between Simon Property Group, owner of premier shopping and mixed-use destinations across North America and Siam Piwat owner and operator of prestige retail developments in Thailand.




adidas


BURBERRY
SIAM PREMIUM OUTLETS
BANGKOK

PRECAST BEAM AND COLUMN

VCON is proud to offer a variety of precast column styles to suit your project's needs. All of our precast concrete products are made at our factory. Precast beams and columns offer an extremely wide range of technical possibilities and have proven to be an efficient solution in accelerating any type of construction. VCON precast columns and beams provide a flexible solution to the structural component of any construction project. Our concrete columns and beams can be used for a variety of applications ranging from parking structures to warehouse structural framework and are extremely durable compared to alternative building materials.

Wide range of technical possibilities, extremely durable

PRECAST CONCRETE GUTTER

VCON Precast Concrete Gutter is suitable for drainage, canals and irrigation system. Precast Concrete Gutter is well-known for providing economical and efficient irrigation system, delivering exceptional performance with the highest level of accuracy.

High Quality

High quality control and aesthetical value of products. Superior dimensional tolerances and finished concrete surfaces. Cleaner and safer construction site.

Long-term Durability

Special reinforcement and high strength concrete. Long-term durability and low maintenance.

Time and cost saving

Faster construction time and lower construction cost. Less labor cost at construction site.

Project : Cambodia Agricultural Value Chain Program - Australian Aid Program designed using ACI Standard (American Concrete Institute)

WIRE MESH

VCON Wire Mesh can furnish a greater variety of wire sizes and spacing. It is an economical and durable option for concrete reinforcement. VCON Wire Mesh is made with high quality cold drawn steel wires, which is spaced by an automatic welding machine. In addition, it is welded into a mat, to prevent bar movement when concrete is poured. The dimension of each mat is 2.4 meters x 6 meters.

High structural performance, durability, economical and versatility of design

Minimize risks

VCON Wire Mesh is prefabricated and welded in plants. This minimizes the risk of missing any of the essential bar components.

Cost saving

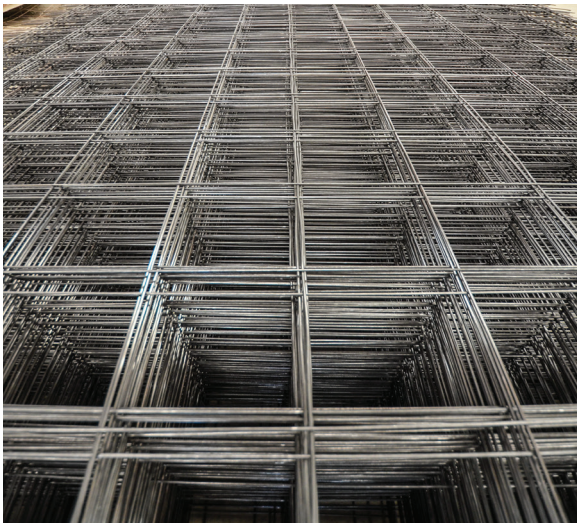
VCON Wire Mesh provides the exact size of reinforcement though variable bar size and spacing, therefore reduces steel waste. VCON Wire Mesh can reduce more than 50% of working time and is ready to use. Faster construction time and less labor costs are achieved.

High Efficiency

Each mat of wire mesh is automatically fabricated and welded by state of the art machines. This will give you a perfect steel reinforcement and strong structures.

Usage for VCON wire mesh (Multipurpose Application)

VCON Wire Mesh suits any reinforced concrete work
- Concrete slab
- Precast floor topping
- Floor for post-tension work
- Concrete road, car park, runway and etc



PRESTRESSED CONCRETE PILE

VCON Pre-stressed Concrete Pile is produced by a Slip Former Machine using Zero Slump Concrete with concrete compressive strength of 400 kg/cm² until the concrete is shaped into square pile shape.

When the concrete reaches compressive strength of 250 kg/cm² , the pile will be cut by required sizes using concrete saw making the pile section completely flat and right-angled. With flat section and high concrete compressive strength, VCON Pre-stressed Concrete Pile can withstand an impact load more than regular cast-in-place concrete piles.

High Strength, Zero slump,

Material properties of Pre-stressed Concrete Pile Production

Concrete

Using concrete with Ultimate Compressive Strength no less than 400 kg/cm^2 at 28 days. Moreover, Ultimate Compressive Strength of no less than 250 kg/cm^2 is achieved during load transferring process using concrete cylinder size ø 6” × 12” testing method.

PC Wire

Low Relaxation Steel Wire diameter of 4 mm, 5 mm, and 7 mm and Maximum Ultimate Tensile Strength of no less than 16,000 – 17,500 kg/cm^2 in accordance with TIS 95-2540

SECTION			
SIZE OF PILE (m)	0.15 x 0.15	0.18 x 0.18	0.22 x 0.22
PERIMETER OF PILE (cm)	56	68	84
SECTIONAL OF PILE (cm^2)	162	242	361
PILE UNIT WEIGHT (kg/m)	38	57	85
MAX. LENGTH (m)	6	8	8
SAFETY FACTOR (ton)	2.16	3.77	4.61

Remarks : Safety factor depends on soil specifications and depth of pile from surface.
Length of pile vary according to client specifications.

Projects

Department Store

The EM Quartier
ICON SIAM
King Power Mahanakhon
Siam Premium Outlet
IKEA Bangyai
MEGA Bangna
Bangkok Mall
The Mall Department Store
Central Department Store
Robinson Department Store
BIG-C
Flynow Outlet Group
The Walk
The Venezia Huahin
Bluport Huahin
The Paseo Park
Central World
Terminal 21 Korat
River City Shopping Complex B
The Bright RAMA II
Samanea Plaza
Carrefour
Simon Outlet
Topgolf MEGA City
One city center
Aeon Mall
Do Home

Retail/ Restaurant

McDonald's
Starbucks
Modernform
Thai Watsadu
Boonthavorn
Porsche Center Thailand
Mercedes Benz showroom
Hardware House

Hotel/ Residential

Dusit Central Park
The Forestias
Siam Kempinski Hotel
Fraser Silver Oaks
Centara Hotel
Shangril-La Hotel
The BASE Condo
Ashton Chula Silom
Ocean Marina Yacht Club
Hotel Nikko
Ibis Hotel
Popular Condominium
HYPE Sathorn
The Park Land Phetkasem 56
Metro Park
The BASE
Siamese Condo
Landmark Siamese Rama 9
Supalai

Airport

Bangkok International Airport
Bangkok International Airport Satellite Terminal
Phuket International Airport
U-tapao International Airport
Royal Thai Air Force Hangar

Office

UOB Bank New Headquarter
Bangkok Bank Office
OCEAN Tower Building
UOB Sathorn
Star Rich
Ritta Construction HQ

Factory

BlueTech City
Dutch Mill Factory
Toshiba Factory
Citizen Factory
Fabrinet Factory
Quanta Computer Thailand
SBS Factory
Alliance Laundry Thailand
Xingda Steel Factory
Reckitt Benckiser
Lion Factory
Ricoh Factory
Amagasaki Pipe
Fuji Electrics
Solar
R&B Food
Mitsubishi Motor
Farmhouse Factory
Siam Bioscience
Indorama Factory
Sri Trang Factory
Hana Semiconductor Factory

Education

Chulalongkorn University
Thammasat University
Mahidol University
Kasetsart University
Wellington College International School
Rajaphat Nakhonpathom
Sarasas Witaed Suksa School
Hastin International School

Hospital

Bumrungrad Hospital
Siriraj Hospital
Phayathai 3 Hospital
Bangkunthian Geriatric Hospital
Vibhavadi Hospital
Vajira Hospital
Ramathibodi Hospital

Government

MRT Blueline
BTS station
Ministry of Public Health
Ministry of Education
DSI Office
Water Authority
EGAT
Benjakitti Park
Amphornsatharn Palace
The Grand Palace Bangkok
Royal Thai Air Force Aircraft Storage Facility

Convention Center

IMPACT Exhibition Center
Asian Game Stadium
Sport Stadium at Thonburi University
Bangkok Glass Sport Stadium

Warehouse

Nestle Warehouse
Hankyu Hanshin Warehouse
TAS Logistic Warehouse
SPP Warehouse
T Park
Tiger Suvarnabhumi
Nikken LBS warehouse


PITSANULOK
PHATHUMTHANI
NAKORN PATHOM
BANGKOK
CHONBURI
CAMBODIA
SINGAPORE

Locations

VCON Headquarters

Tel : +66 (02) 455-0151
Fax : +66 (02) 454-0868
E-mail : vcon@vconthai.com
Address : 253 Buddhamonthon 2nd RD Bangpai Bangkhae Bangkok 10160, Thailand

Singapore Office

Tel : +65 3105 1345
E-mail : vcon@vconthai.com
Address : 160 Robinson Road, #14-04 Singapore Business Federation Center Singapore 068914

Cambodia Office

Tel : +855 95 508 181
E-mail : cambodia@vconthai.com
Address : A5-8 La Seine, Diamond
: Island, Tonle Bassac, Commune Chamkarmon District, Phnom Penh 12301, Cambodia

Nakhon Pathom Factory

Tel : +66 (02) 455-0151
Fax : +66 (034) 311-486
E-mail : vcon@vconthai.com
Address : 38 Moo 6 Phetkasem Road. Klong Mai, Samphran, Nakhon Pathom 73110

Nakhon Pathom II Factory

Tel : +66 (02) 455-0151
E-mail : vcon@vconthai.com
Address : 85/1 Moo 4 Srimahapho,
: Nakhonchaisri, Nakhon Pathom 73120

Chonburi Factory

Tel : +66 (02) 455-0151
Fax : +66 (038) 195-054 Ext. 107
E-mail : vcon@vconthai.com
Address : 81 Moo 4 Map Phai, Ban Bueng, Chonburi 20170

Phatumthani Factory

Tel : +66 (02) 455-0151
Fax : +66 (02) 150-2701 Ext. 103
E-mail : vcon@vconthai.com
Address : 76 Moo 5
Lum Luk Ka-Thanyaburi Rd.
Bungtonglang, Lum Luk Ka,
Phathumthani 12150

Phitsanulok Factory

Tel : +66 (02) 455-0151
Fax : +66 (02) 454-0868
E-mail : vcon@vconthai.com
Address : 78 Moo 6
Wang Thong - Sak Lek Rd.
Din Thong, Wang Thong,
Phitsanulok, 65130

Cambodia Factory

Tel : +855 85 508 181
E-mail : cambodia@vconthai.com
Address : Phnom Penh Precast Construction Road #51, Chamkar Luong Village, Veang Chas Commune, Oudong District, Kampong Speu, Cambodia

Driven by Innovation, Skills and Quality