

Pre-stressed Spun Concrete Pile Catalogue

Our products are compliance with:





INTRODUCTION

Winabumi Sdn Bhd is the first manufacturer of Pre-stressed Spun Concrete Poles in Sabah started 2006. Winabumi products covering power distribution project (i.e SESB & KKLW) as well as telecommunication poles, supporting fiberization of field.

In 2015, Winabumi Sdn Bhd constructs the first Pre-stressed Spun Concrete Pile Factory and commences operation in the first quarter of 2016. The construction of the modern factory utilizes latest technology, producing consistent and superior quality Spun Concrete Piles with concrete grade 80 and above.

Winabumi is 100% local Sabah manufacturing company and utilizing best available local materials and manpower.



Vision

To support the rapid growth of Sabah economy by reducing cost of construction and lead time.
To supply to regional area of growth like Sarawak, Brunei, Kalimantan as well as Philippine.

Objective

- Reduce Logistic Cost
- Reduce Waiting Time
- Reduce Wastage of Piles at Job Site
- Increase Flexibility in Pile Length at Job Site to Exchangeable Actual Length required at Site
- Locally available Immediate Response Team
- Stockyard Facility for Job Site





STANDARDS

Winabumi Piles comply with MS 1314 : Part 4 : 2004 and also generally comply with all relevant standards.

CERTIFICATION

Winabumi Piles are certified by SIRIM QAS International and CIDB Malaysia.

MATERIALS

Aggregates - Coarse aggregates shall be 20mm granite. Fine aggregates shall be clean river sand.

Cement - Portland cement comply with MS 522 : 2007

Prestressing Steel - High frequency induction

heat treated bars manufactured to JIS G 3137 : 1994 or equivalent.

Spiral Wire - Hard drawn wire.

CONCRETE STRENGTH

Minimum concrete cube strength :

at transfer of prestress 30 N/mm²

at 28 days - Grade 80 pile 80 N/mm²

JOINT

The joint is designed to have the same performance as the main body particularly in respect of bending strength. All Winabumi Piles have steel extension plates for splicing.

LIFTING POINTS

For piles up to 12m length, piles shall be lifted by using steel hooks at both ends.

PILE SHOE

All Winabumi Piles will be supplied either open ended, with a flat shoe or with a X-pointed shoe.

CURING

After casting, the piles are steam cured.

When the concrete reaches the specified transfer strength, the piles are demoulded, marked and checked for quality. The piles can normally be transported and driven after seven days from the date of casting, or when the cube strength reaches 80 N/mm².

IDENTIFICATION

All Winabumi Piles have the trademark stamped as follows :



STANDARD LENGTHS

Winabumi Piles are available in lengths of 6m, 9m and 12m.

DELIVERY

Winabumi Standard Piles are normally available ex-stock. Custom made piles usually takes two to three weeks from date of confirmed order.





PROPERTIES OF WINABUMI PILES GRADE 80 PILES

CLASS A (EFFECTIVE PRESTRESS 4.0N/mm²)

Pile Diameter	Pile Length	Nominal Wall thickness	Nominal Weight	Tendon		Area of Concrete	Effective Prestress	Recommended Axial Load	Bending Moment	
				Size	No.				Crack	Ultimate
mm	m	mm	Kg/m	mm	No.	Mm ²	MPa	Ton	kN.m	kN.m
300	6,9,12	60	122	7.1	6	45,239	4.1	85	22.1	34.6
350	6,9,12	60	156	7.1	8	54,664	4.5	103	31.3	57.9
450	6,9,12	70	250	7.1	10	83,566	4.0	159	63.6	99.5
500	6,9,12	80	308	7.1	12	105,558	4.0	201	90.8	121.4
600	6,9,12	90	420	9.0	12	144,199	4.5	272	154.3	275.5

CLASS B (EFFECTIVE PRESTRESS 5.0N/mm²)

Pile Diameter	Pile Length	Nominal Wall thickness	Nominal Weight	Tendon		Area of Concrete	Effective Prestress	Recommended Axial Load	Bending Moment	
				Size	No.				Crack	Ultimate
mm	m	mm	Kg/m	mm	No.	mm ²	MPa	Ton	kN.m	kN.m
250	6,9,12	55	91	7.1	6	33,694	5.4	63	15.2	27.8
*300	6,9,12	60	122	7.1	7	45,239	5.0	85	21.3	40.5
350	6,9,12	70	156	7.1	9	61,575	5.1	115	38.9	64.1
*450	6,9,12	80	250	9.0	8	92,991	5.0	174	78.3	131.8
500	6,9,12	90	308	9.0	10	115,925	5.1	217	109.3	187.9
*600	6,9,12	100	420	9.0	14	157,080	5.0	295	179.5	323.6

* Immediate Stock available at KKIP Factory, Telipok, Kota Kinabalu, Sabah

CLASS C (EFFECTIVE PRESTRESS 7.0N/mm²)

Pile Diameter	Pile Length	Nominal Wall thickness	Nominal Weight	Tendon		Area of Concrete	Effective Prestress	Recommended Axial Load	Bending Moment	
				Size	No.				Crack	Ultimate
mm	m	mm	Kg/m	mm	No.	mm ²	Mpa	Ton	kN.m	kN.m
250	6,9,12	55	91	7.1	7	33,694	7.1	61	17.6	32.4
300	6,9,12	60	122	7.1	10	45,239	7.1	82	30.0	57.1
350	6,9,12	70	156	9.0	8	61,575	7.2	112	47.2	95.1
450	6,9,12	80	250	9.0	12	92,991	7.1	170	94.9	193.2
500	6,9,12	90	308	9.0	15	115,925	7.1	211	130.90	273.6
600	6,9,12	100	450	10.7	14	157,080	7.0	287	217.6	443.1

FORMULA FOR AXIAL LOAD

Based on BS 8004: 1986, the maximum allowable axial stress that may be applied to a pile acting as a short strut should be one Quarter of (specified works cube strength at 28 days less the prestress after losses)

$$N = f_{ca} \times A$$

$$= \frac{1}{4} (f_{cu} - f_{pe}) \times A$$

Where, N = maximum allowable axial load

A = cross section area of concrete

f_{ca} = permissible compressive strength of concrete

f_{cu} = specified compressive strength of concrete

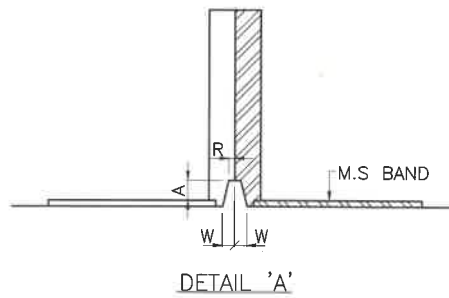
f_{pe} = effective prestress in concrete





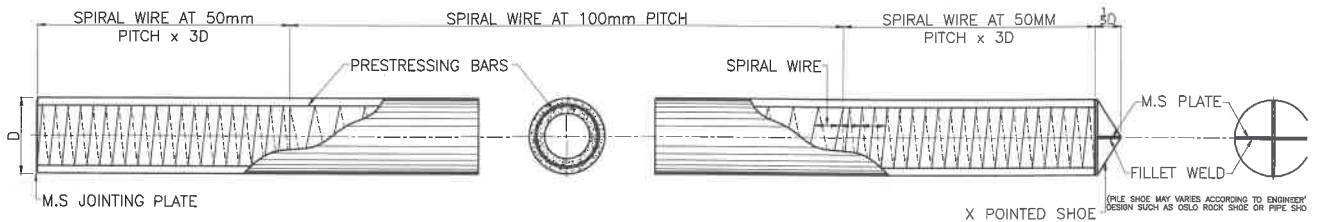
SECTIONAL DETAILS OF WBSB PILES

JOINT WELDING DETAILS

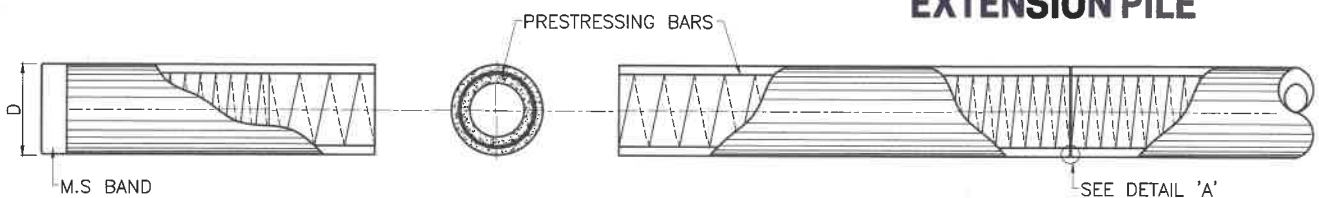


Dia Of Pile	Throat Thickness A	W	Root R
mm	mm	mm	mm
250	8.5	4.0	2.0
300	8.5	4.0	2.0
350	8.5	4.0	2.0
450	10	4.5	2.0
500	12	5.0	2.0
600	12	5.0	2.0

STARTER PILE



EXTENSION PILE





MANUFACTURING PROCESS OF PILES



Concrete Batching



Wire Caging



Feeding



Pre-stressing



Spinning



Curing



Demoulding



QC Inspection



Stockyard



Delivery



CERTIFICATES

independent european certification



The management of
WINABUMI SDN BHD
(114895-H)
Mile 7, Jalan Tuaran, Inanam
89357 Kota Kinabalu,
Sabah, Malaysia

has been assessed and certified by Independent European Certification
in respect of their Quality Management System and found to be meeting the requirements of.

ISO 9001:2008

Certification is hereby granted providing the rules and conditions relating to the certification
are observed at all times and reference should be made to the Company Quality Manual for
the exclusions from Section 7

Certification Scope:

Manufacture of Pre-Stressed Spun Concrete Poles

Date of First Issue Date of Revision Valid Until:
3rd April 2010 14th December 2015 22nd January 2017

Certificate Number:

601501

Authorized Signature for Independent European Certification (IEC) Sdn. Bhd.

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Phone: +603 7642 6100
Fax: +603 7642 6144
E-mail: ieccert@ieccert.com 03 68122002 25 67



The certification is granted in the presence of
Independent European Certification
and the certification is valid only for
WINABUMI SDN BHD.



No. Perakuan: **A 001601**

PERAKUAN PEMATIHAN STANDARD (BAHAN BINAAN)

Adalah dengan ini Pengilang/Pengeluar yang dinyatakan di bawah ini telah mengemukakan bahan binaan yang
dipersuasi oleh Lembaga mengikut Bahagian VIIA, Akta Lembaga Pembangunan Industri Pembinaan
Malaysia (Pindaan 2011). Perakuan ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan
Perakuan ini mengesahkan bahawa bahan atau produk binaan yang dinyatakan di bawah telah dipasarkan

No. Pendaftaran: 1160030SD0145
Nama Pengilang / Pengeluar: WINABUMI SDN BHD
Alamat Kilang Berdaftar: LOT 5,6 & 7, LORONG 2A-1, KIKIP TIMUR
INDUSTRIAL ZONE 12 KOTA KINABALU INDUSTRIAL
PARK
89493 KOTA KINABALU
SABAH

Kategori dan Jenis produk bahan binaan:
(Rujuk Lampiran A untuk butiran terperinci)
PRECAST CONCRETE PILES
- Precast Pre-tensioned Spun Concrete Piles

Tarikh Mula Berkuatkuasa: 30-08-2016
Tarikh Tamat Tempoh Perakuan: 29-08-2017

Perakuan ini hendaklah dipertahankan selawat-lewatnya 30 hari sebelum tarikh tamat tempoh perakuan

Nota: Perakuan dikeluarkan setelah Lembaga menjalankan pemeriksaan dan pengesahan ke atas kilang dan
produk-produk yang terkandung di dalam Penilaian Produk (Product Certification) yang dikeluarkan oleh
Badan Penilaian yang dikawal. Pihak pengeluar/pengilang adalah bertanggungjawab untuk memohon
Penilaian Produk (Product Certificate) semula dalam tempoh sah laku.

IR. SHARIFUDIN CHE OMAR
PENGARAH NEGERI
CIDB NEGERI SABAH
b.p. Kobus Eksekutif



LESEN PENSIJILAN BARANGAN Product Certification Licence

No. Lesen: **PC002343**
Licence No:



SIRIM QAS International Sdn. Bhd. dengan ini mengesahkan kepada
SIRIM QAS International Sdn. Bhd. hereby grants to

WINABUMI SDN BHD,
LOT 5,6 & 7 LORONG 2A-1
KIKIP TIMUR, INDUSTRIAL ZONE 12
KOTA KINABALU INDUSTRIAL PARK
89493, KOTA KINABALU
SABAH, MALAYSIA

Lesen untuk menggunakan Tanda Pensijilan di atas barangan
a licence to use the Certification Mark on
PRECAST PRETENSIONED SPUN CONCRETE PILES (SPUN PILES)

Please refer to detail in the SPECIFICATION

sebagai mematuhi keperluan
as complying with
MS 1314 : PART 4 : 2004

Khalidah Mustafa

Khalidah Mustafa
Pengerusi Lesen
Managing Director
SIRIM QAS International Sdn. Bhd.

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Tarikh Mula Penilaian: 03 June 2016
Cawangan Since: Sab. Sebringa
Valid Until: 03 June 2017

Tarikh Dikeluarkan: 17 June 2016
Issue Date: No SIRI: 004613
Serial No:

Lesen ini dipertahankan selawat-lewatnya 30 hari selepas tamat tempoh Perakuan. Perakuan Berdaftar 000004 BAH Winabumi Sdn. Bhd.
This Licence is granted subject to the provisions of the Product Certification Agreement of SIRIM QAS International Sdn. Bhd.



Companies:

WINABUMI SDN. BHD. (714955-H)

WINABUMI MARKETING SDN. BHD. (1181924-X)

MEGA SUMMIT SDN. BHD. (738118-A)

Specialize In:

Pre - Stressed Spun Concrete Poles

Pre - Stressed Spun Concrete Piles

Concrete Kicking Block

KKIP Office & Factory

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Inanam Factory

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