

**BUILT ON TRUST**



# CASING OSCILLATOR



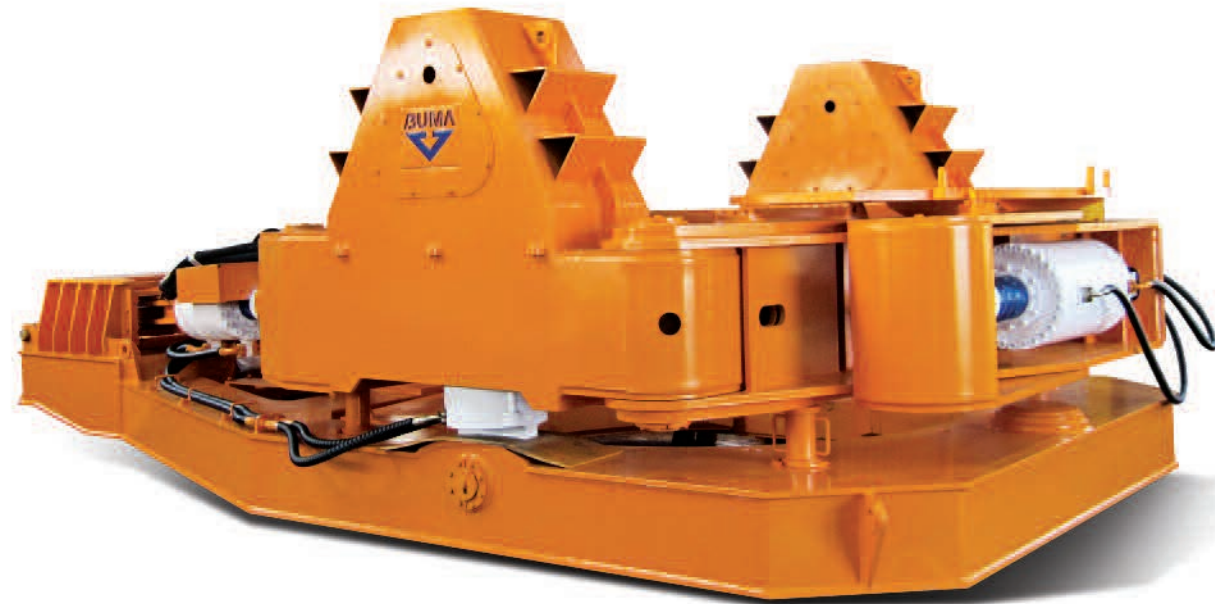
**GÁNDARA**  
SU EQUIPO EN CIMENTACIÓN

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**BUMA CE CO., LTD.**  
BUMA Construction Equipment

# BUILT ON TRUST

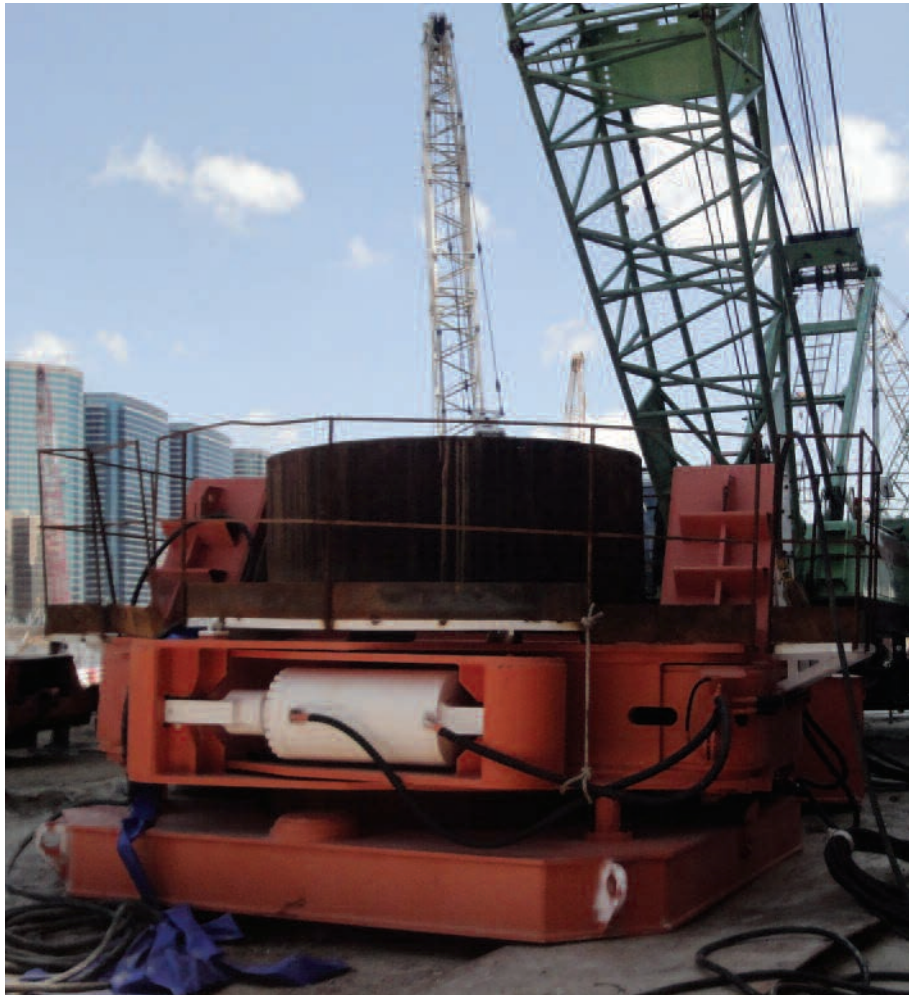


**SHAFT DRILLING FOR LARGE BORED PILING**

**STRONG OSCILLATING TORQUE AND LIFTING FORCE**

**BORE PILING FOR BIG STRUCTURE BUILDING**

# Company



BUMA CE is a leading manufacturer and supplier of foundation equipment in Korea. Since the company was built in 1992, we have been supplying the equipment to all around world with outstanding reputation of not only good quality products but also much knowledge in foundation work.

- Reverse Circulation Drilling Rig
- Casing Oscillator
- Hammer Grab & Spherical Grab
- Diaphragm Wall Grab (Mechanical & Hydraulic)
- Casing & Casing Joint
- Drilling Tools & Accessories

**Our mission is to provide the best solution to customers based on engineering knowhow of many years' experiences.**

# Casing Oscillator Method

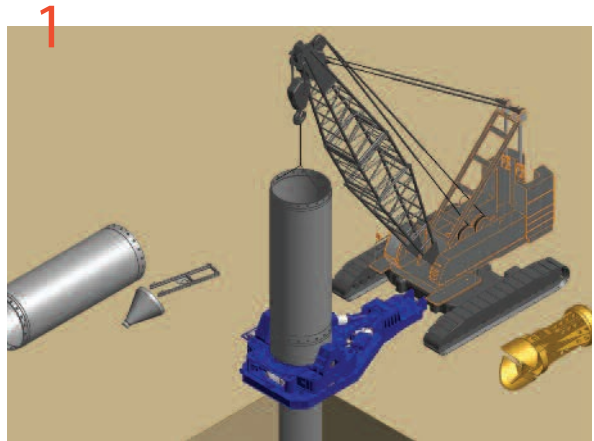


Cased Drilled Shafts are required when ground conditions are so unstable that drilled holes can not safely be stabilized with drilling slurry or where lose of ground must be controlled. Casing can be temporary or permanent steel pipe which provides a 100% stable excavation for the full length of the drilled shaft.

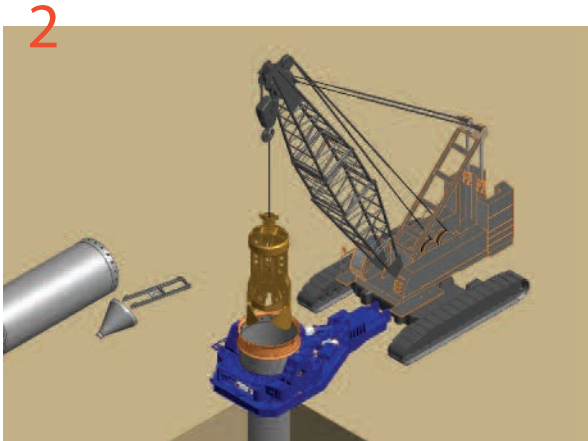
The Casing Oscillator method provides a superior method for drilled shaft construction with high quality ensuring an uninterrupted construction schedule through the elimination of anomalies.

This technology is the only proven method to drill large diameter shafts in caving conditions, such as loose sands and gravelly soil with cobbles and boulders. Boulders several feet in diameter can be removed safely by the use of Hammer Grab without major interruption to the excavation process. Since only water is used for drilling, environmental concerns are minimized or totally eliminated using this technique.

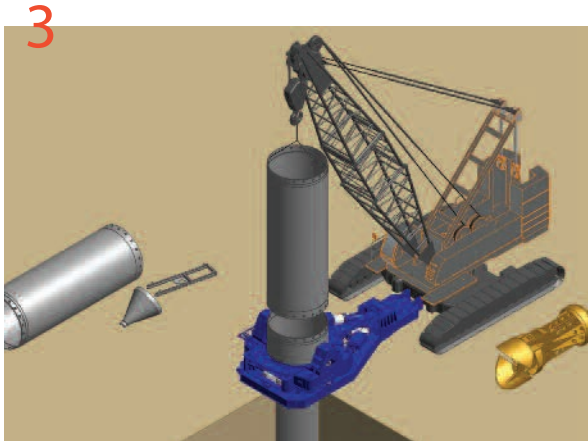
# Casing Oscillator Method



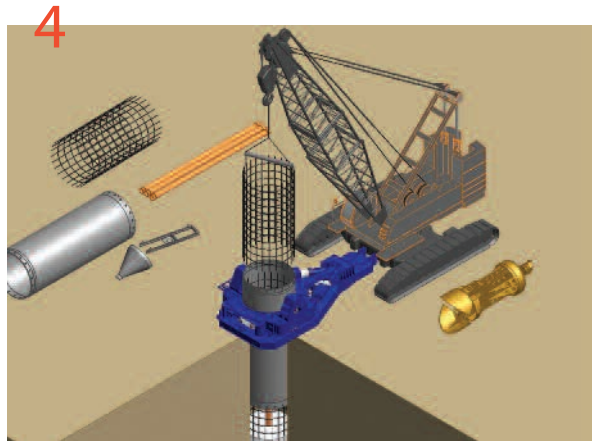
1  
Install starter casing equipped with cutting shoe. Add new casing section with bolted connection.



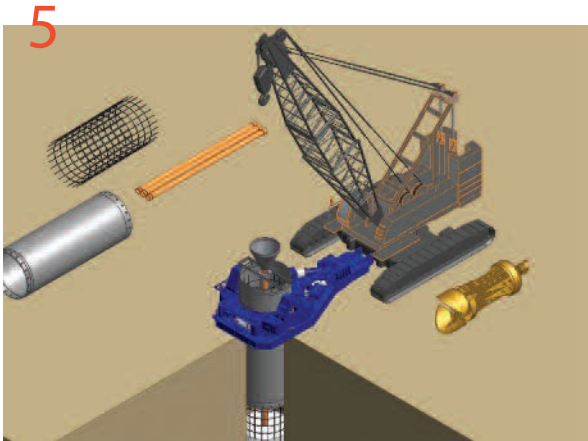
2  
Excavate soil continuously during casing installation. Maintain water head inside casing to balance external hydrostatic head at all times.



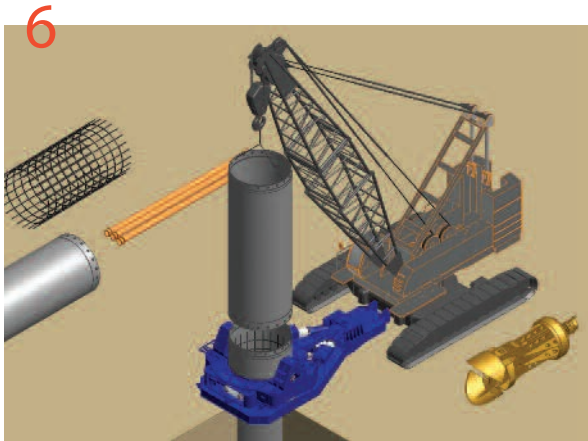
3  
Add new casing sections until pile has been excavated to depth. Keep casing tip ahead of excavation at all times.



4  
Install reinforcement cage and suspend at proper elevation.

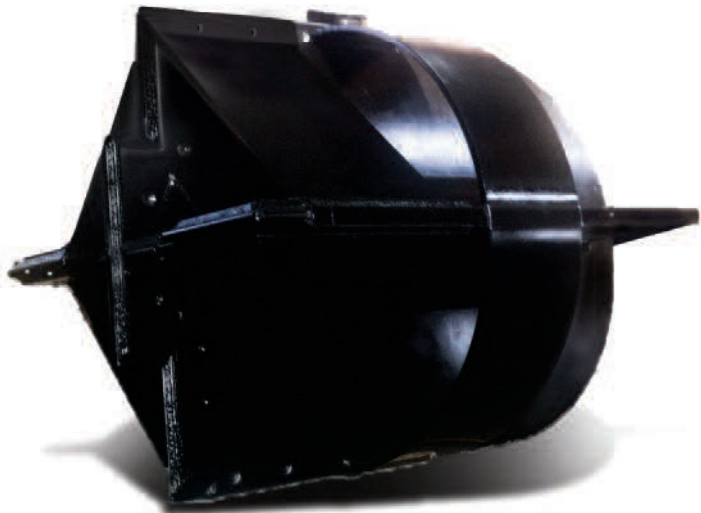


5  
Pour concrete using sectional tremie pipe. Maintain concrete head above casing tip at all times.

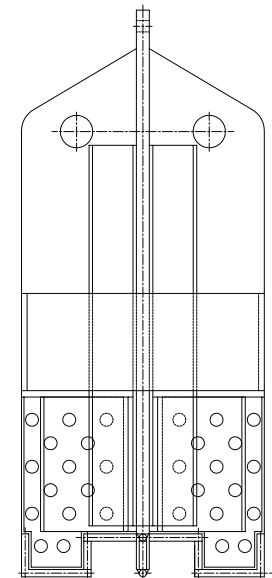
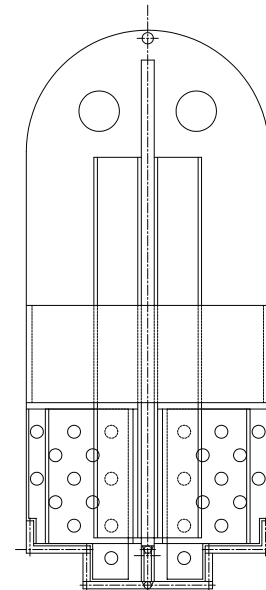


6  
Remove casing and tremie pipe sections simultaneously as concrete is poured.

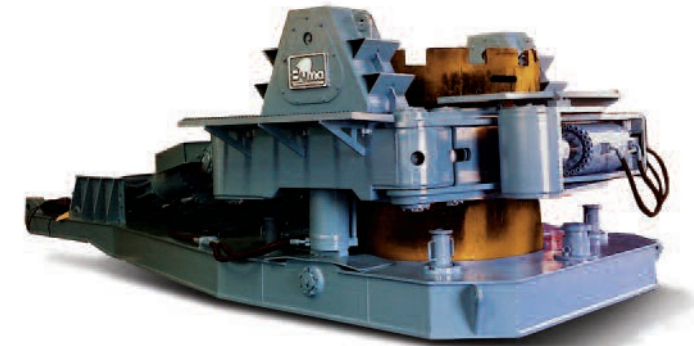
# Chisel



Model	Casing Diameter [mm]	Length [mm]	Weight [kg]
T100CH	1200/1120	3000	3800
T130CH	1500/1400	3500	6700
T150CH	1800/1680	3500	7725
T170CH	2000/1880	3500	8900
T190CH	2200/2080	3500	10000
T220CH	2500/2380	3500	12500
T250CH	2800/2640	3500	13800
T270CH	3000/2840	3500	15200



# Casing Oscillator



## General Type(G)

Model	C1500G	C2000G	C2500G	C3000G	C3300G	C2000H	C2500H	C3000H
Max. Casing Diameter	1.5m	2.0m	2.5m	3.0m	3.3m	2.0m	2.5m	3.0m
Max. Oscillating Torque	285ton.m	451ton.m	844ton.m	1,017ton.m	1,402ton.m	721ton.m	942ton.m	1,185ton.m
Max. Lifting Force	243ton	314ton	581ton	726ton	1,018ton	581ton	726ton	804ton
Lifting Stroke	600mm	600mm	650mm	650mm	650mm	600mm	650mm	650mm
Max. Clamping Force	197ton	257ton	402ton	509ton	509ton	402ton	509ton	509ton
Weight(Approx.)	26ton	31ton	48ton	53ton	66ton	42ton	54ton	58ton
Overall Width	3,206mm	3,547mm	4,090mm	4,700mm	5,150mm	3,780mm	4,210mm	4,700mm
Overall Length	6,931mm	7,921mm	8,961mm	9,171mm	10,420mm	8,431mm	9,066mm	9,151mm
Overall Height	2,210mm	2,210mm	2,575mm	2,655mm	2,750mm	2,525mm	2,655mm	2,655mm
Power Pack	P2612C / P3618C / P4214D	P2612C / P3618C / P4214D	P3618C / P5318C / P4218D	P3618C / P5318C / P4218D	P6028C	P2612C / P3618C / P4214D	P3618C / P5318C / P4218D	P3618C / P5318C / P4218D

## Heavy Duty Type(H)

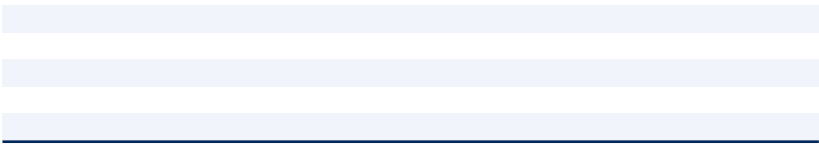
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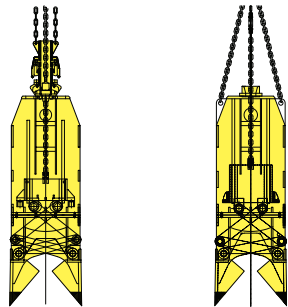
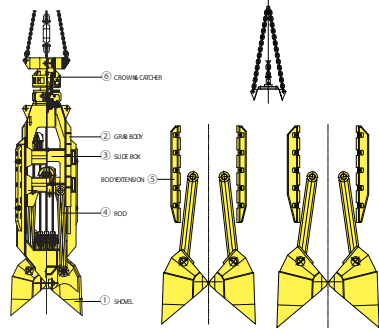
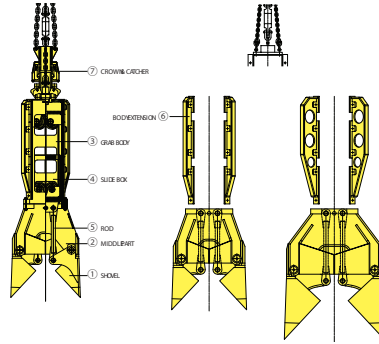
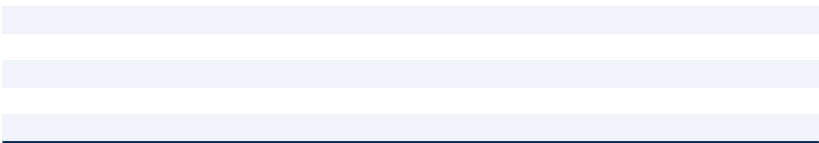
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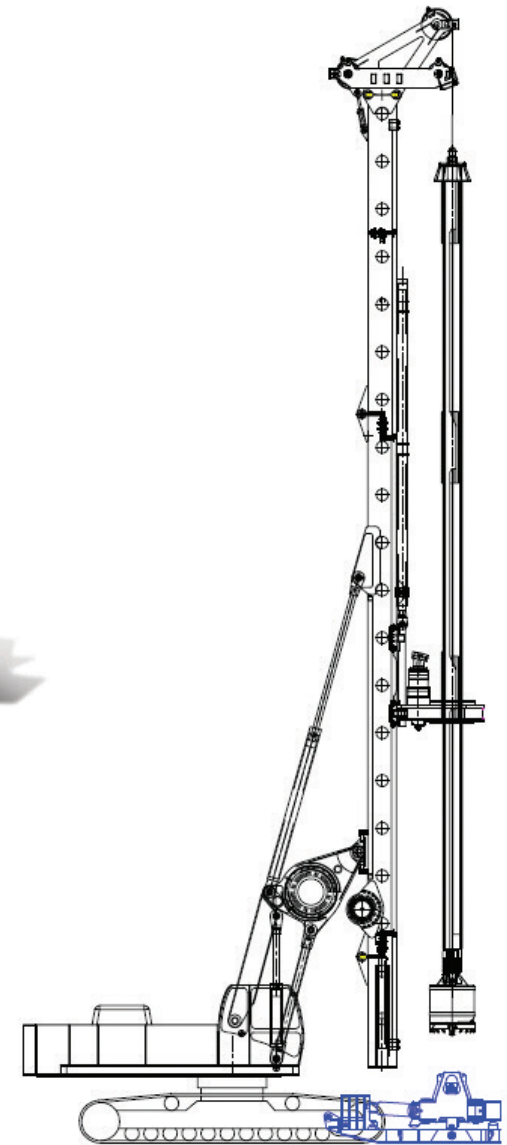
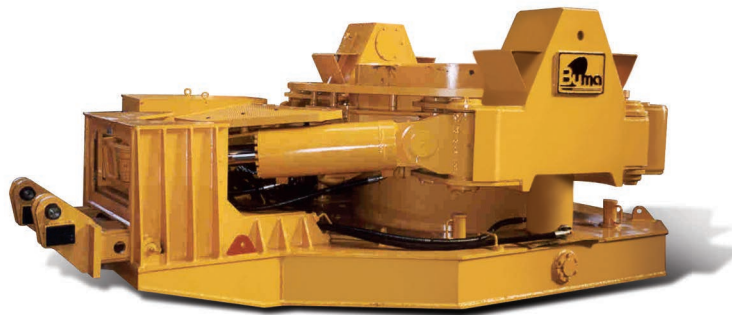


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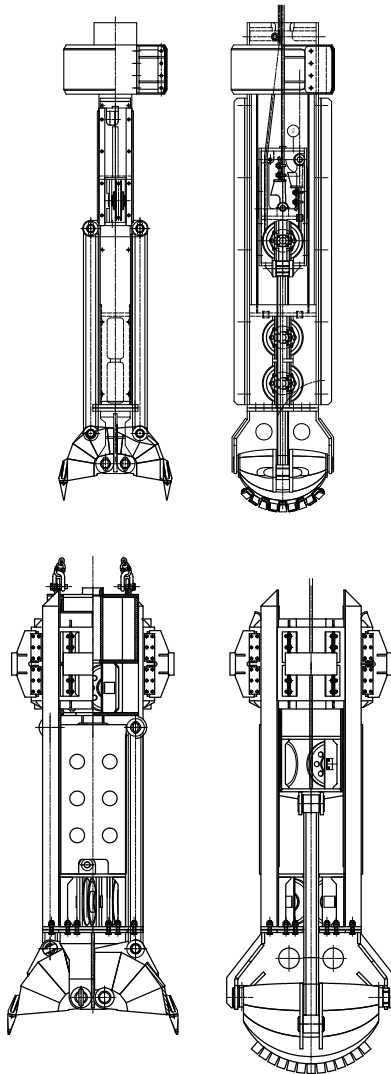
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# Spherical Grab



## SG1 Class

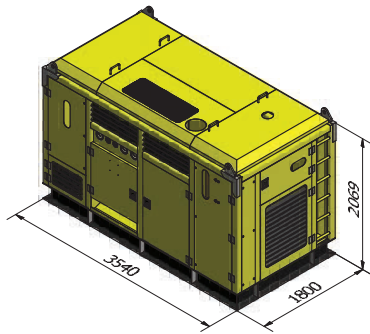
Model	Casing Diameter [mm]	Jaw Capacity [ℓ ]	Length [mm]	Weight [kg]
S1180	1300/1220	230	5630	8000
S1380	1500/1400	420	5800	10500
S1630	1800/1680	730	5875	11300

## SG2 Class

Model	Casing Diameter [mm]	Jaw Capacity [ℓ ]	Length [mm]	Weight [kg]
S1810	2000/1880	970	5800	13850
S2010	2200/2080	1450	6000	17000
S2310	2500/2380	2250	6105	18500
S2580	2800/2640	3050	6215	19600
S2710	3000/2840	3900	6325	20300

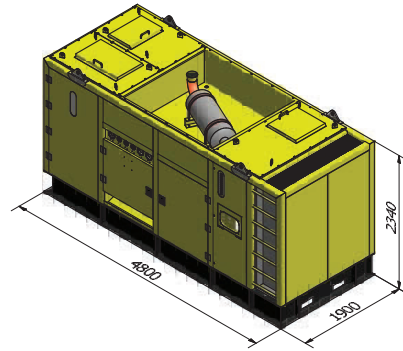
# Power Pack

Unit : mm



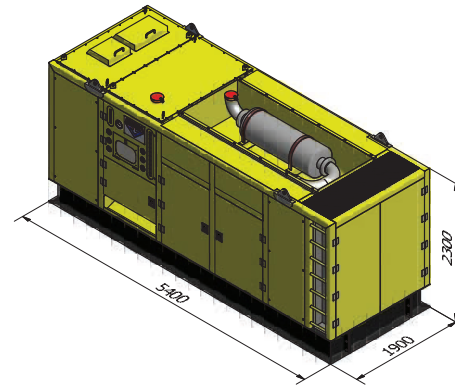
## P2612C

Engine	CUMMINS 6CT8.3C (TIER )
	194KW / 260HP / 2200rpm
Hyd. Pump	Max. Flow 228ℓ /min x 2ea
	Operating 250bar / Max. 350bar
Weight(Approx.)	6.5ton



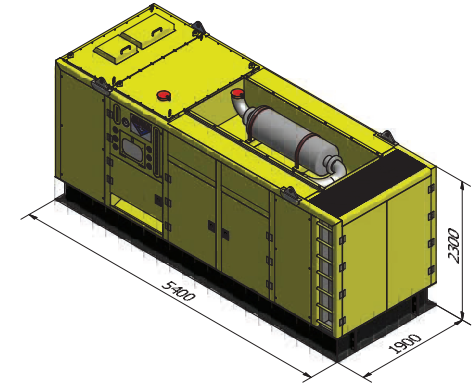
## P3618C

Engine	CUMMINS QSM11-360 (TIER )
	268KW / 360HP / 2100rpm
Hyd. Pump	Max. Flow 324ℓ /min x 2ea
	Operating 250bar / Max. 350bar
Weight(Approx.)	8ton



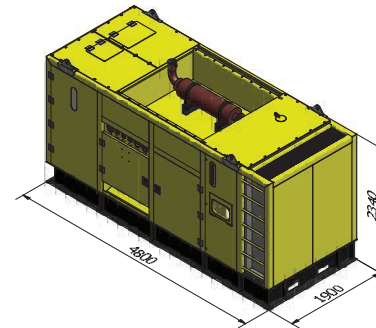
## P5318C

Engine	CUMMINS QSX15-535 (TIER )
	399KW / 535HP / 2100rpm
Hyd. Pump	Max. Flow 324ℓ /min x 2ea
	Operating 250bar / Max. 350bar
Weight(Approx.)	11ton



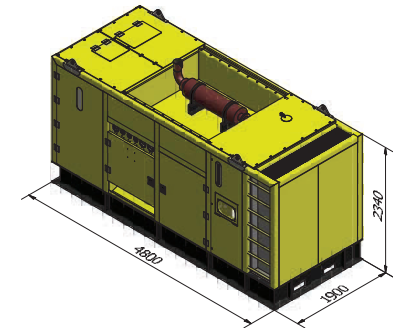
## P6028C

Engine	CUMMINS QSX15-600 (TIER )
	447KW / 600HP / 2100rpm
Hyd. Pump	Max. Flow 504ℓ /min x 2ea
	Operating 250bar / Max. 350bar
Weight(Approx.)	11.5ton



## P4214D

Engine	DOOSAN P126TI-2 (TIER )
	307KW / 418HP / 1800rpm
Hyd. Pump	Max. Flow 252ℓ /min x 2ea
	Operating 250bar / Max. 350bar
Weight(Approx.)	8.5ton



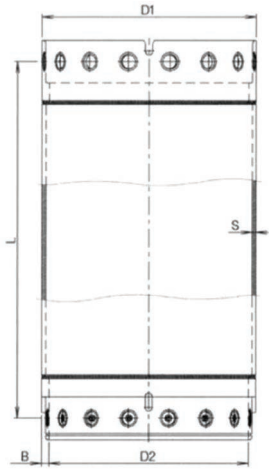
## P4218D

Engine	DOOSAN P126TI-2 (TIER )
	307KW / 418HP / 1800rpm
Hyd. Pump	Max. Flow 324ℓ /min x 2ea
	Operating 250bar / Max. 350bar
Weight(Approx.)	8.5ton

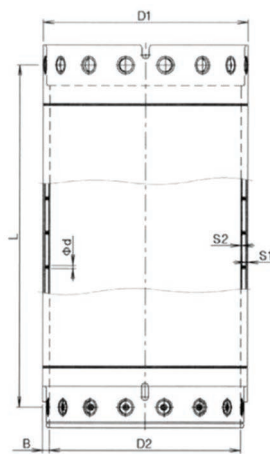
BUMA CE CO.,LTD.

3rd generation Power pack maximizes cooling effect of hydraulic operating oil and minimizes noise level through arduous technical development

\*\*As option, application of different brand engine (Volvo, Caterpillar) is available.



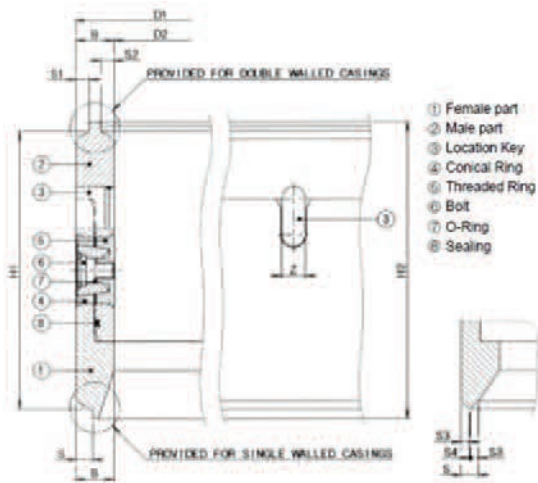
	fi	fl



	fi	fl



# Casing Joint

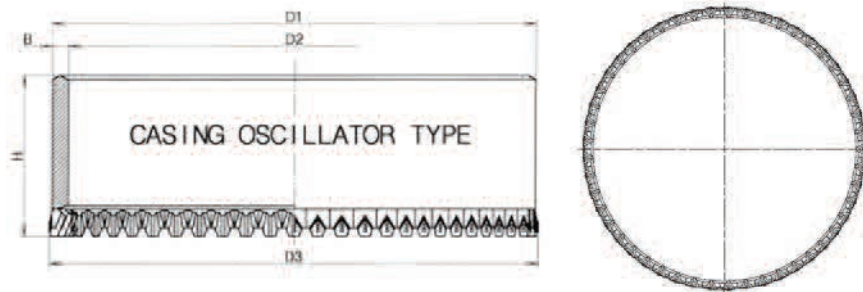


D1/D2	H1	H2	S	S1	S2	S3	S4	B	Conical Ring Q'ty Type	Threaded Ring Q'ty Type	Bolt Q'ty Type	Locating Key Q'ty Type	Sealing [mm]	Weight [kg]
600/520	340	380	22	17	12	10	2	40	8 C75	8 T75	8 B32	4 40	10x510	188
700/620	340	380	22	17	12	10	2	40	8 C75	8 T75	8 B32	4 40	10x610	221
800/720	340	380	22	17	12	10	2	40	8 C75	8 T75	8 B32	4 40	10x700	255
900/820	340	380	22	17	12	10	2	40	8 C75	8 T75	8 B32	4 40	10x785	288
1000/920	340	380	22	17	12	10	2	40	10 C115	10 T115	10 B32	4 40	10x900	315
1080/1000	340	380	22	17	12	10	2	40	12 C115	12 T115	12 B32	4 40	10x975	333
1200/1120	340	380	27	17	12	12	3	40	12 C115	12 T115	12 B32	4 40	10x1075	375
1500/1400	585	625	27	17	12	12	3	50	16 C165	16 T165	16 B42	4 50	10x1370	1049
1800/1700	585	625	27	22	17	12	3	50	20 C165	20 T165	20 B42	4 50	10x1670	1260
1800/1680	585	625	27	22	22	12	3	60	20 C220	20 T220	20 B48	4 50	10x1650	1384
2000/1880	585	625	27	22	22	12	3	60	20 C220	20 T220	20 B48	4 50	12x1860	1659
2200/2080	585	625	27	22	22	12	3	60	20 C220	20 T220	20 B48	4 50	12x2050	1830
2500/2380	585	625	27	22	22	12	3	60	20 C220	20 T220	20 B48	4 50	12x2300	2018
2800/2640	585	625	35	28	28	16	3	80	24 C300	24 T300	24 B65	6 50	12x2600	2950
3000/2840	585	625	35	28	28	16	3	80	24 C300	24 T300	24 B65	6 50	12x2800	3250

\*\*Casing Joint of other bolt type is also available.



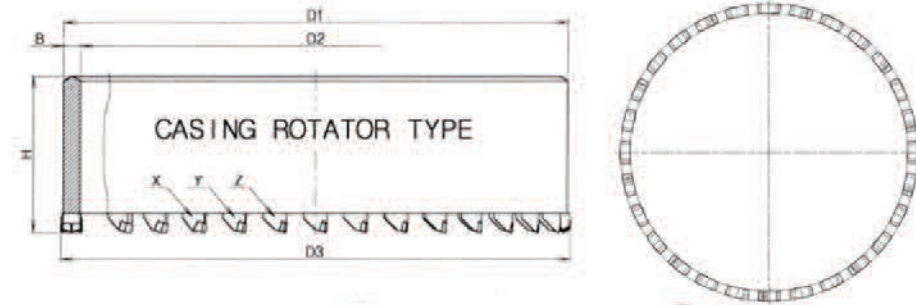
# Casing Shoe



Pocket Assembling



Welding Assembling



Pocket Assembling



Welding Assembling

## Casing Oscillator Type

D1/D2	D3	B	H	Weight	Weld-on T.C. Tip	
	[mm]			[kg]	[mm]	Q'ty
600/520	610	40	510	270	110x100x60/15	18
700/620	710	40	510	310	110x100x60/15	21
800/720	810	40	510	360	110x100x60/15	24
900/820	910	40	510	410	110x100x60/15	27
1000/920	1010	40	510	450	110x100x60/15	30
1080/1000	1090	40	510	470	110x100x60/15	32
1200/1120	1210	40	510	550	110x100x60/15	37
1500/1400	1516	50	510	840	110x100x60/15	47
1800/1700	1816	50	510	1010	110x100x60/15	56
1800/1680	1816	60	510	1180	110x100x60/15	56
2000/1880	2016	60	510	1315	110x100x60/15	62
2200/2080	2216	60	510	1450	110x100x60/15	69
2500/2380	2516	60	510	1650	110x100x60/15	78
2800/2640	2816	80	510	2460	110x100x60/15	87
3000/2840	3016	80	510	2650	110x100x60/15	94

## Casing Rotator Type

D1/D2	D3	B	H	Weight	Weld-on T.C. Tip [Q'ty]		
	[mm]			[kg]	x (in)	y (center)	z (out)
600/520	610	40	450	240	6	6	6
700/620	710	40	450	280	7	7	7
800/720	810	40	450	325	8	8	8
900/820	910	40	450	365	9	9	9
1000/920	1010	40	450	410	10	10	10
1080/1000	1090	40	450	460	11	11	11
1200/1120	1210	40	450	490	12	12	12
1500/1400	1516	50	450	760	15	15	15
1800/1700	1816	50	450	920	18	18	18
1800/1680	1816	60	450	1100	18	18	18
2000/1880	2016	60	450	1215	20	20	20
2200/2080	2216	60	450	1340	22	22	22
2500/2380	2516	60	450	1530	25	25	25
2800/2640	2816	80	450	2270	28	28	28
3000/2840	3016	80	450	2435	30	30	30

# Tremie Pipe

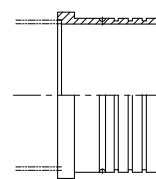


BUMA provide various types of Tremie Pipe according to  
Pipe internal diameter

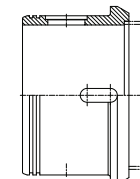
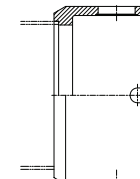
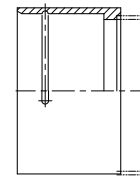
NW200 (183mm), NW250 (254mm) & NW300 (302mm)

Pipe joint type

Wire Locking Type & Bolt Locking Type.

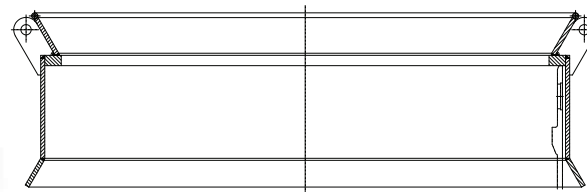


Wire Locking Type



Bolt Locking Type

# Casing Funnel



To protect Casing Joint located on the top of the Casing and support drilling tools insertion in to the Casing, BUMA provide Casing Funnel.

# BUILT ON TRUST

[www.bumace.com](http://www.bumace.com)



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