

Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures

Rig Manufacturer : CASAGRANDE SPA		Rig Type : B105 UD0120	
Operation mode: PDC 4x8.5kb + 800mm pads			
Completed by: PERESSINI	09/06/2014	Checked by: PERESSINI	
Item	Mass (kg)	Moment arm (m)	Moment (kNm)
UPPER WORKS	15200	0,59	88,45
LOWER WORKS	8500	0,00	0,00
ROPE / KELLY / CHAIN SUSPENDEE EQUIPMENT	7600	2,65	197,57
COUNTERWEIGHT	2600	-3,20	-81,62
OTHER	0	0,00	0,00
TOTAL	33900	0,61	204,40

Tracks			
Track bearing length (m)	3,31		
Track pad width (m)	0,8		
Distance between centrelines of tracks (m)	3		

Front Foot Pads			
Pad Bearing Area (m ²)	0,00	Actual Dimensions	None
Pad Maximum Loading (kN)	0,00	Actual Shape	None
Pad Moment Arm (m)	0,00		

Rear Foot Pads			
Pad Bearing Area (m ²)	0,00	Actual Dimensions	None
Pad Maximum Loading (kN)	0,00	Actual Shape	None
Pad Moment Arm (m)	0,00		

Forces			
Maximum Extraction Force (kN)	105,00		
Maximum Penetration Force (kN)	90,00		
Maximum Auxillary Force (kN)	45,00	Auxillary Force Moment Arm (m)	2,97

Pressure Summary for Platform Design (unfactored)

MODE	BRE LOAD CASE (1 or 2)	Length (m)	Width (m)	UDL Pressure (kPa)
Standing	1	2,25	0,8	112
Travelling	1	2,25	0,8	112
Handling	1	1,62	0,8	142
Penetrating	2	1,33	0,8	87
Extracting	2	1,97	0,8	109
Other	NOT USED	N/A	0,8	N/A

MODE	WARNING MESSAGES	ERROR MESSAGES FOR FORCES		
Standing	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK

MODE	ERROR MESSAGES FOR FOOT PADS		Notes
Standing	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for rig operation on level ground with a vertical mast, unless noted below !
Travelling	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for use where the rig is working on a ground supported platform !
Handling	Front Foot Pad Force OK	Rear Foot Pad Force OK	Foot pad pressures are adjusted to equalise with the track pressures !
Penetrating	Front Foot Pad Force OK	Rear Foot Pad Force OK	Rigs to be operated in accordance with manufacturer's & employer's instructions
Extracting	Front Foot Pad Force OK	Rear Foot Pad Force OK	INPUT PAGE FOR PENETRATING AND EXTRACTING
Other	Front Foot Pad Force OK	Rear Foot Pad Force OK	WHEELBASE: 2650mm

Note: The disclaimer on the first worksheet applies to all tables in this workbook



Note: The disclaimer on the first worksheet applies to all tables in this workbook

Rig Manufacturer :	CASAGRANDE SPA	Rig Type :	B105 UD0120
Completed by:	PERESSINI	Operation mode:	PDC 4x8.5kb + 800mm pads
	17/06/2014	Checked by:	PERESSINI

Main Components :

	Item	Mass (kg)	Moment arm (m)	Moment (kNm)
UPPER WORKS	Mast Assembly+pantograph (at working radius 2650mm)	4800	1.47	69.22
	Upperstructure	7200	-0.87	-61.45
	Rotary head+accessories	3200	2.57	80.68
				0.00
				0.00
				0.00
				0.00
LOWER WORKS	Undercarriage	8500	0.00	0.00
				0.00
				0.00
				0.00
				0.00
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	Kelly bar 4x8,5 + guide [4600]	4600	2.65	119.58
	Tool [3000]	3000	2.65	77.99
				0.00
				0.00
COUNT.	Counterweight	2600	-3.20	-81.62
				0.00
OTHER	None	0	0.00	0.00
				0.00
				0.00

Main Components Totals

UPPER WORKS	15200	0.59	88.45
LOWER WORKS	8500	0.00	0.00
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	7600	2.65	197.57
COUNTERWEIGHT	2600	-3.20	-81.62
OTHER	0	0.00	0.00
TOTAL	33900	0.61	204.40

Tracks

Track bearing length (m)	3.31
Track pad width (m)	0.8
Distance between centrelines of tracks (m)	3.00

Front Foot Pads

Pad Bearing Area (m ²)	0.00	Actual Dimensions	None
Pad Maximum Loading (kN)	0.00	Actual Shape	None
Pad Moment Arm (m)	0.00		

Rear Foot Pads

Pad Bearing Area (m ²)	0.00	Actual Dimensions	None
Pad Maximum Loading (kN)	0.00	Actual Shape	None
Pad Moment Arm (m)	0.00		

Forces

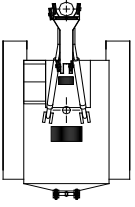
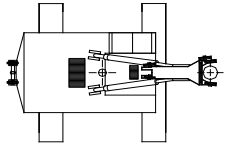
Maximum Extraction Force (kN)	105.00		
Maximum Penetration Force (kN)	90.00		
Maximum Auxillary Force (kN)	45.00	Auxillary Force Moment Arm (m)	2.97

Notes

INPUT PAGE FOR PENETRATING AND EXTRACTING WHEELBASE: 2650mm

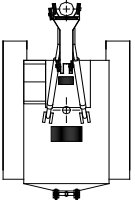
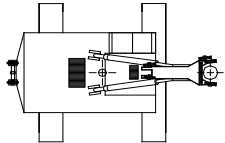
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CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads Travelling							Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid
B105 UD0120							Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)	Max Track loading dimensions		
		ecc (m)	Bearing Len. (m)	L (m)	Q (KPa)									
Lower Works	8500	0.000	0											
Counterweight	2600	-3.200	-82											
Upper Works	15200	0.593	88											
Other	0	0.000	0											
Rope / Kelly / Chain Suspended	7600	2.650	198											
Machine Weight (kg)	33900	0.615	204											
				Force (kN)	Max. (kN)									
Auxiliary Line (kgf)	0	2.970	0	0.00	45.00	Foot Pad Area (m2)								
Net Extraction Force (kgf)	0	2.650	0	0.00	105.00									
Net Penetration Force (kgf)	0	2.650	0	0.00	90.00									
Front Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Front Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)				0.000	0		
Rear Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Rear Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)				0.000	0		
Others	0	0.000	0	Track Bearing Length (m)		3.310	Maximum Equivalent Design Values				2.245	112		
Track Total Loading (kgf)	33900	0.615	204	Track Width Centres (m)		3.000								
				Track pad width (m)		0.800	BRE LOAD CASE (1 or 2)				1			

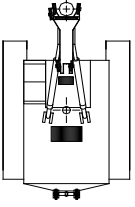
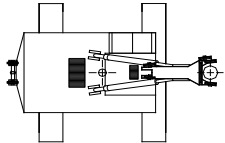


Auxiliary Line Force OK
Extraction Force OK
Penetration Force OK
Front Foot Pad Force OK
Rear Foot Pad Force OK

CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads					Handling		Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid	
B105 UD0120							Max Track loading dimensions		Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)		
Lower Works		8500	0.000	0											
Counterweight		2600	-3.200	-82											
Upper Works		15200	0.593	88											
Other		0	0.000	0											
Rope / Kelly / Chain Suspended		7600	2.650	198											
Machine Weight (kg)		33900	0.615	204											
					Force (kN)	Max. (kN)									
Auxiliary Line (kgf)	3670	2.970	107	36.00	45.00	Foot Pad Area (m ²)	90	30	30	109	109	0.000	3.310	3.310	109
Net Extraction Force (kgf)	0	2.650	0	0.00	105.00		90	30	30	109	109	0.000	3.310	3.310	109
Net Penetration Force (kgf)	0	2.650	0	0.00	90.00		90	30	30	109	109	0.000	3.310	3.310	109
Front Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Front Foot Pads Equivalent Length (m) and Bearing Pressure (kN/m ²)					0.000	0		
Rear Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Rear Foot Pads Equivalent Length (m) and Bearing Pressure (kN/m ²)					0.000	0		
Others	0	0.000	0	Track Bearing Length (m)		3.310	Maximum Equivalent Design Values					1.621	142		
Track Total Loading (kgf)	37570	0.845	311	Track Width Centres (m)		3.000									
				Track pad width (m)		0.800						BRE LOAD CASE (1 or 2)		1	

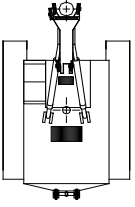
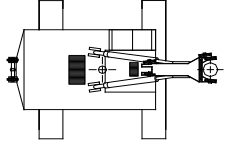


Auxiliary Line Force OK
Extraction Force OK
Penetration Force OK
Front Foot Pad Force OK
Rear Foot Pad Force OK

CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads							Extracting		Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid
B105 UD0120							Max Track loading dimensions		Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)	ecc (m)	Bearing Len. (m)	
				L (m)	Q (KPa)											
Lower Works	8500	0.000	0													
Counterweight	2600	-3.200	-82													
Upper Works	15200	0.593	88													
Other	0	0.000	0													
Rope / Kelly / Chain Suspended	7600	2.650	198													
Machine Weight (kg)	33900	0.615	204													
				Force (kN)	Max. (kN)											
Auxiliary Line (kgf)	0	2.970	0	0.00	45.00	Foot Pad Area (m2)										
Net Extraction Force (kgf)	963	2.650	25	84.00	105.00		90	36	36	93	93	0.000	3.310	3.310	93	
Net Penetration Force (kgf)	0	2.650	0	0.00	90.00		90	36	36	93	93	0.000	3.310	3.310	93	
Front Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Front Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)					0.000	0			
Rear Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Rear Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)					0.000	0			
Others	0	0.000	0	Track Bearing Length (m)		3.310	Maximum Equivalent Design Values					1.968	109			
Track Total Loading (kgf)	34863	0.671	229	Track Width Centres (m)		3.000										
				Track pad width (m)		0.800										
												BRE LOAD CASE (1 or 2)		2		




Auxiliary Line Force OK
 Extraction Force OK
 Penetration Force OK
 Front Foot Pad Force OK
 Rear Foot Pad Force OK

CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads					Other		Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid	
B105 UD0120							Max Track loading dimensions		Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)		
Lower Works		8500	0.000	0											
Counterweight		2600	-3.200	-82											
Upper Works		15200	0.593	88											
Other		0	0.000	0											
Rope / Kelly / Chain Suspended		7600	2.650	198											
Machine Weight (kg)		33900	0.615	204											
					Force (kN)	Max. (kN)									
Auxiliary Line (kgf)	0	2.970	0	0.00	45.00										
Net Extraction Force (kgf)	0	2.650	0	0.00	105.00	Foot Pad Area (m2)									
Net Penetration Force (kgf)	0	2.650	0	0.00	90.00										
Front Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Front Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)					0.000	0		
Rear Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Rear Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)					0.000	0		
Others	0	0.000	0			Track Bearing Length (m)	3.310	Maximum Equivalent Design Values					2.245	112	
Track Total Loading (kgf)	33900	0.615	204			Track Width Centres (m)	3.000								
						Track pad width (m)	0.800	BRE LOAD CASE (1 or 2)					1		



Auxiliary Line Force OK
 Extraction Force OK
 Penetration Force OK
 Front Foot Pad Force OK
 Rear Foot Pad Force OK

Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures

Rig Manufacturer : CASAGRANDE SPA		Rig Type : B105 UD0120		
Operation mode: PDC 4x8.5kb + 800mm pads				
Completed by: PERESSINI	17/06/2014	Checked by: PERESSINI		
Item	Mass (kg)	Moment arm (m)	Moment (kNm)	
UPPER WORKS	15200	0.59	88.45	
LOWER WORKS	8500	0.00	0.00	
ROPE / KELLY / CHAIN SUSPENDEE EQUIPMENT	7600	2.65	197.57	
COUNTERWEIGHT	2600	-3.20	-81.62	
OTHER	0	0.00	0.00	
TOTAL	33900	0.61	204.40	
Tracks				
Track bearing length (m)	3.31			
Track pad width (m)	0.8			
Distance between centrelines of tracks (m)	3			
Front Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Rear Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Forces				
Maximum Extraction Force (kN)	105.00			
Maximum Penetration Force (kN)	90.00			
Maximum Auxillary Force (kN)	45.00	Auxillary Force Moment Arm (m)	2.97	
Pressure Summary for Platform Design (unfactored)				
MODE	BRE LOAD CASE (1 or 2)	Length (m)	Width (m)	UDL Pressure (kPa)
Standing	1	2.25	0.8	112
Travelling	1	2.25	0.8	112
Handling	1	1.62	0.8	142
Penetrating	2	1.33	0.8	87
Extracting	2	1.97	0.8	109
Other	NOT USED	N/A	0.8	N/A
MODE	WARNING MESSAGES	ERROR MESSAGES FOR FORCES		
Standing	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
MODE	ERROR MESSAGES FOR FOOT PADS		Notes	
Standing	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for rig operation on level ground with a vertical mast, unless noted below ! Only for use where the rig is working on a ground supported platform ! Foot pad pressures are adjusted to equalise with the track pressures ! Rigs to be operated in accordance with manufacturer's & employer's instructions INPUT PAGE FOR PENETRATING AND EXTRACTING WHEELBASE: 2650mm	
Travelling	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Handling	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Penetrating	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Extracting	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Other	Front Foot Pad Force OK	Rear Foot Pad Force OK		
<p>Note: The disclaimer on the first worksheet applies to all tables in this workbook</p>				

Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures

Rig Manufacturer : CASAGRANDE SPA		Rig Type : B105 UD0120	
Operation mode: PDC 4x8.5kb + 800mm pads			
Completed by: PERESSINI	09/06/2014	Checked by: PERESSINI	
Item	Mass (kg)	Moment arm (m)	Moment (kNm)
UPPER WORKS	15200	0,59	88,45
LOWER WORKS	8500	0,00	0,00
ROPE / KELLY / CHAIN SUSPENDE EQUIPMENT	7600	2,65	197,57
COUNTERWEIGHT	2600	-3,20	-81,62
OTHER	0	0,00	0,00
TOTAL	33900	0,61	204,40

Tracks			
Track bearing length (m)	3,31		
Track pad width (m)	0,8		
Distance between centrelines of tracks (m)	3		

Front Foot Pads			
Pad Bearing Area (m ²)	0,00	Actual Dimensions	None
Pad Maximum Loading (kN)	0,00	Actual Shape	None
Pad Moment Arm (m)	0,00		

Rear Foot Pads			
Pad Bearing Area (m ²)	0,00	Actual Dimensions	None
Pad Maximum Loading (kN)	0,00	Actual Shape	None
Pad Moment Arm (m)	0,00		

Forces			
Maximum Extraction Force (kN)	140,00		
Maximum Penetration Force (kN)	90,00		
Maximum Auxillary Force (kN)	45,00	Auxillary Force Moment Arm (m)	2,97

Pressure Summary for Platform Design (unfactored)

MODE	BRE LOAD CASE (1 or 2)	Length (m)	Width (m)	UDL Pressure (kPa)
Standing	1	2,25	0,8	112
Travelling	1	2,25	0,8	112
Handling	1	1,62	0,8	142
Penetrating	2	1,33	0,8	87
Extracting	2	1,67	0,8	139
Other	NOT USED	N/A	0,8	N/A

MODE	WARNING MESSAGES	ERROR MESSAGES FOR FORCES		
Standing	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK

MODE	ERROR MESSAGES FOR FOOT PADS		Notes
Standing	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for rig operation on level ground with a vertical mast, unless noted below !
Travelling	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for use where the rig is working on a ground supported platform !
Handling	Front Foot Pad Force OK	Rear Foot Pad Force OK	Foot pad pressures are adjusted to equalise with the track pressures !
Penetrating	Front Foot Pad Force OK	Rear Foot Pad Force OK	Rigs to be operated in accordance with manufacturer's & employer's instructions
Extracting	Front Foot Pad Force OK	Rear Foot Pad Force OK	INPUT PAGE FOR PENETRATING AND EXTRACTING
Other	Front Foot Pad Force OK	Rear Foot Pad Force OK	WHEELBASE: 2650mm

Note: The disclaimer on the first worksheet applies to all tables in this workbook



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Rig Manufacturer :	CASAGRANDE SPA	Rig Type :	B105 UD0120
Completed by:	PERESSINI	Operation mode:	PDC 4x8.5kb + 800mm pads
		Checked by:	PERESSINI

Main Components :

	Item	Mass (kg)	Moment arm (m)	Moment (kNm)
UPPER WORKS	Mast Assembly+pantograph (at working radius 2650mm)	4800	1.47	69.22
	Upperstructure	7200	-0.87	-61.45
	Rotary head+accessories	3200	2.57	80.68
				0.00
				0.00
				0.00
				0.00
LOWER WORKS	Undercarriage	8500	0.00	0.00
				0.00
				0.00
				0.00
				0.00
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	Kelly bar 4x8,5 + guide [4600]	4600	2.65	119.58
	Tool [3000]	3000	2.65	77.99
				0.00
				0.00
COUNT.	Counterweight	2600	-3.20	-81.62
				0.00
OTHER	None	0	0.00	0.00
				0.00
				0.00

Main Components Totals

UPPER WORKS	15200	0.59	88.45
LOWER WORKS	8500	0.00	0.00
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	7600	2.65	197.57
COUNTERWEIGHT	2600	-3.20	-81.62
OTHER	0	0.00	0.00
TOTAL	33900	0.61	204.40

Tracks

Track bearing length (m)	3.31
Track pad width (m)	0.8
Distance between centrelines of tracks (m)	3.00

Front Foot Pads

Pad Bearing Area (m ²)	0.00	Actual Dimensions	None
Pad Maximum Loading (kN)	0.00	Actual Shape	None
Pad Moment Arm (m)	0.00		

Rear Foot Pads

Pad Bearing Area (m ²)	0.00	Actual Dimensions	None
Pad Maximum Loading (kN)	0.00	Actual Shape	None
Pad Moment Arm (m)	0.00		

Forces

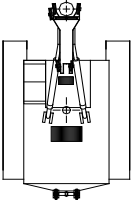
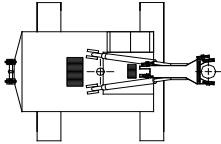
Maximum Extraction Force (kN)	140.00		
Maximum Penetration Force (kN)	90.00		
Maximum Auxillary Force (kN)	45.00	Auxillary Force Moment Arm (m)	2.97

Notes

INPUT PAGE FOR PENETRATING AND EXTRACTING WHEELBASE: 2650mm

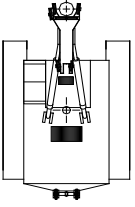
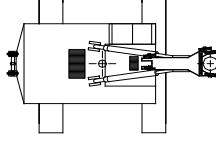
Note: The disclaimer on the first worksheet applies to all tables in this workbook



CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads Standing							Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid
B105 UD0120							Max Track loading dimensions		Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)	
				L (m)	Q (KPa)									
Lower Works	8500	0.000	0											
Counterweight	2600	-3.200	-82											
Upper Works	15200	0.593	88											
Other	0	0.000	0											
Rope / Kelly / Chain Suspended	7600	2.650	198											
Machine Weight (kg)	33900	0.615	204											
				Force (kN)	Max. (kN)									
Auxiliary Line (kgf)	0	2.970	0	0.00	45.00	Foot Pad Area (m2)								
Net Extraction Force (kgf)	0	2.650	0	0.00	140.00									
Net Penetration Force (kgf)	0	2.650	0	0.00	90.00									
Front Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Front Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)					0.000	0	
Rear Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Rear Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)					0.000	0	
Others	0	0.000	0	Track Bearing Length (m)		3.310	Maximum Equivalent Design Values					2.245	112	
Track Total Loading (kgf)	33900	0.615	204	Track Width Centres (m)		3.000								
				Track pad width (m)		0.800	BRE LOAD CASE (1 or 2)					1		

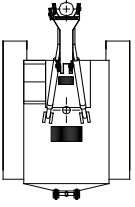
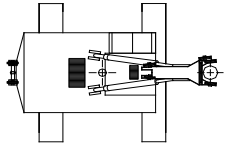


Auxiliary Line Force OK
Extraction Force OK
Penetration Force OK
Front Foot Pad Force OK
Rear Foot Pad Force OK

CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads Travelling							Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid
B105 UD0120							Relative Angle - Upper Body and Tracks (degrees)		Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)	Max Track loading dimensions	
									ecc (m)	Bearing Len. (m)	L (m)	Q (KPa)		
Lower Works	8500	0.000	0											
Counterweight	2600	-3.200	-82											
Upper Works	15200	0.593	88											
Other	0	0.000	0											
Rope / Kelly / Chain Suspended	7600	2.650	198											
Machine Weight (kg)	33900	0.615	204											
				Force (kN)	Max. (kN)									
Auxiliary Line (kgf)	0	2.970	0	0.00	45.00									
Net Extraction Force (kgf)	0	2.650	0	0.00	140.00	Foot Pad Area (m2)								
Net Penetration Force (kgf)	0	2.650	0	0.00	90.00									
Front Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Front Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)				0.000	0		
Rear Foot Pads Loading (kgf)	0	0.000	0	0.00	0.00	0.000	Rear Foot Pads Equivalent Length (m)and Bearing Pressure (kN/m ²)				0.000	0		
Others	0	0.000	0	Track Bearing Length (m)		3.310	Maximum Equivalent Design Values				2.245	112		
Track Total Loading (kgf)	33900	0.615	204	Track Width Centres (m)		3.000								
				Track pad width (m)		0.800	BRE LOAD CASE (1 or 2)				1			

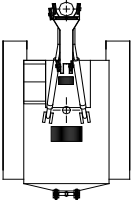
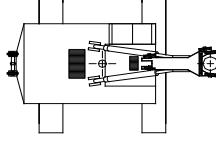


Auxiliary Line Force OK
Extraction Force OK
Penetration Force OK
Front Foot Pad Force OK
Rear Foot Pad Force OK

CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads Handling							Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid																																																																																																				
B105 UD0120							<table border="1"> <thead> <tr> <th rowspan="2">Relative Angle - Upper Body and Tracks (degrees)</th> <th rowspan="2">Bearing pressure at front of L.H. track (kN/m²)</th> <th rowspan="2">Bearing pressure at rear of L.H. track (kN/m²)</th> <th rowspan="2">Bearing pressure at front of R.H. track (kN/m²)</th> <th rowspan="2">Bearing pressure at rear of R.H. track (kN/m²)</th> <th colspan="2">Max Track loading dimensions</th> <th colspan="2">Equivalent Bearing</th> </tr> <tr> <th>ecc (m)</th> <th>Bearing Len. (m)</th> <th>L (m)</th> <th>Q (KPa)</th> </tr> </thead> <tbody> <tr><td>0</td><td>190</td><td>0</td><td>190</td><td>0</td><td>0.845</td><td>2.431</td><td>1.621</td><td>142</td></tr> <tr><td>0</td><td>190</td><td>0</td><td>190</td><td>0</td><td>0.845</td><td>2.431</td><td>1.621</td><td>142</td></tr> <tr><td>0</td><td>190</td><td>0</td><td>190</td><td>0</td><td>0.845</td><td>2.431</td><td>1.621</td><td>142</td></tr> <tr><td>0</td><td>190</td><td>0</td><td>190</td><td>0</td><td>0.845</td><td>2.431</td><td>1.621</td><td>142</td></tr> <tr><td>90</td><td>30</td><td>30</td><td>109</td><td>109</td><td>0.000</td><td>3.310</td><td>3.310</td><td>109</td></tr> <tr><td>90</td><td>30</td><td>30</td><td>109</td><td>109</td><td>0.000</td><td>3.310</td><td>3.310</td><td>109</td></tr> <tr><td>90</td><td>30</td><td>30</td><td>109</td><td>109</td><td>0.000</td><td>3.310</td><td>3.310</td><td>109</td></tr> </tbody> </table>					Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)		Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)	Max Track loading dimensions		Equivalent Bearing		ecc (m)	Bearing Len. (m)	L (m)	Q (KPa)	0	190	0	190	0	0.845	2.431	1.621	142	0	190	0	190	0	0.845	2.431	1.621	142	0	190	0	190	0	0.845	2.431	1.621	142	0	190	0	190	0	0.845	2.431	1.621	142	90	30	30	109	109	0.000	3.310	3.310	109	90	30	30	109	109	0.000	3.310	3.310	109	90	30	30	109	109	0.000	3.310	3.310	109	<table border="1"> <thead> <tr> <th>Force (kN)</th> <th>Max. (kN)</th> </tr> </thead> <tbody> <tr><td>36.00</td><td>45.00</td></tr> <tr><td>0.00</td><td>140.00</td></tr> <tr><td>0.00</td><td>90.00</td></tr> <tr><td>0.00</td><td>0.00</td></tr> <tr><td>0.00</td><td>0.00</td></tr> </tbody> </table>		Force (kN)	Max. (kN)	36.00	45.00	0.00	140.00	0.00	90.00	0.00	0.00	0.00	0.00	Foot Pad Area (m ²)		<table border="1"> <thead> <tr> <th colspan="2">Front Foot Pads Equivalent Length (m) and Bearing Pressure (kN/m²)</th> <th colspan="2">Rear Foot Pads Equivalent Length (m) and Bearing Pressure (kN/m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>3.310</td> <td>0.000</td> <td>3.310</td> </tr> </tbody> </table>		Front Foot Pads Equivalent Length (m) and Bearing Pressure (kN/m ²)		Rear Foot Pads Equivalent Length (m) and Bearing Pressure (kN/m ²)		0.000	3.310	0.000	3.310
Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)	Max Track loading dimensions		Equivalent Bearing																																																																																																											
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Others	0	0.000	0																																																																																																															
Track Total Loading (kgf)	37570	0.845	311																																																																																																															
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Auxiliary Line Force OK
 Extraction Force OK
 Penetration Force OK
 Front Foot Pad Force OK
 Rear Foot Pad Force OK

CASAGRANDE SPA		Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	 		Mode : PDC 4x8.5kb + 800mm pads					Other		Transformation from triangular or trapezoidal to an equivalent rectangular pressure distribution under track maintaining the load centroid	
B105 UD0120							Max Track loading dimensions		Relative Angle - Upper Body and Tracks (degrees)	Bearing pressure at front of L.H. track (kN/m ²)	Bearing pressure at rear of L.H. track (kN/m ²)	Bearing pressure at front of R.H. track (kN/m ²)	Bearing pressure at rear of R.H. track (kN/m ²)		
Lower Works		8500	0.000	0											
Counterweight		2600	-3.200	-82											
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Other		0	0.000	0											
Rope / Kelly / Chain Suspended		7600	2.650	198											
Machine Weight (kg)		33900	0.615	204											
					Force (kN)	Max. (kN)									
Auxiliary Line (kgf)	0		2.970	0	0.00	45.00									
Net Extraction Force (kgf)	0		2.650	0	0.00	140.00	Foot Pad Area (m2)								
Net Penetration Force (kgf)	0		2.650	0	0.00	90.00									
Front Foot Pads Loading (kgf)	0		0.000	0	0.00	0.00									
Rear Foot Pads Loading (kgf)	0		0.000	0	0.00	0.00									
Others	0		0.000	0											
Track Total Loading (kgf)	33900		0.615	204											
					Track Bearing Length (m)	3.310									
					Track Width Centres (m)	3.000									
					Track pad width (m)	0.800									
												Maximum Equivalent Design Values		2.245	112
													BRE LOAD CASE (1 or 2)		1



Auxiliary Line Force OK
 Extraction Force OK
 Penetration Force OK
 Front Foot Pad Force OK
 Rear Foot Pad Force OK

Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures

Rig Manufacturer : CASAGRANDE SPA		Rig Type : B105 UD0120		
Operation mode: PDC 4x8.5kb + 800mm pads				
Completed by: PERESSINI	17/06/2014	Checked by: PERESSINI		
Item	Mass (kg)	Moment arm (m)	Moment (kNm)	
UPPER WORKS	15200	0.59	88.45	
LOWER WORKS	8500	0.00	0.00	
ROPE / KELLY / CHAIN SUSPENDEED EQUIPMENT	7600	2.65	197.57	
COUNTERWEIGHT	2600	-3.20	-81.62	
OTHER	0	0.00	0.00	
TOTAL	33900	0.61	204.40	
Tracks				
Track bearing length (m)	3.31			
Track pad width (m)	0.8			
Distance between centrelines of tracks (m)	3			
Front Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Rear Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Forces				
Maximum Extraction Force (kN)	140.00			
Maximum Penetration Force (kN)	90.00			
Maximum Auxillary Force (kN)	45.00	Auxillary Force Moment Arm (m)	2.97	
Pressure Summary for Platform Design (unfactored)				
MODE	BRE LOAD CASE (1 or 2)	Length (m)	Width (m)	UDL Pressure (kPa)
Standing	1	2.25	0.8	112
Travelling	1	2.25	0.8	112
Handling	1	1.62	0.8	142
Penetrating	2	1.33	0.8	87
Extracting	2	1.67	0.8	139
Other	NOT USED	N/A	0.8	N/A
MODE	WARNING MESSAGES	ERROR MESSAGES FOR FORCES		
Standing	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
MODE	ERROR MESSAGES FOR FOOT PADS		Notes	
Standing	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for rig operation on level ground with a vertical mast, unless noted below ! Only for use where the rig is working on a ground supported platform ! Foot pad pressures are adjusted to equalise with the track pressures ! Rigs to be operated in accordance with manufacturer's & employer's instructions INPUT PAGE FOR PENETRATING AND EXTRACTING WHEELBASE: 2650mm	
Travelling	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Handling	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Penetrating	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Extracting	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Other	Front Foot Pad Force OK	Rear Foot Pad Force OK		
<p>Note: The disclaimer on the first worksheet applies to all tables in this workbook</p>		