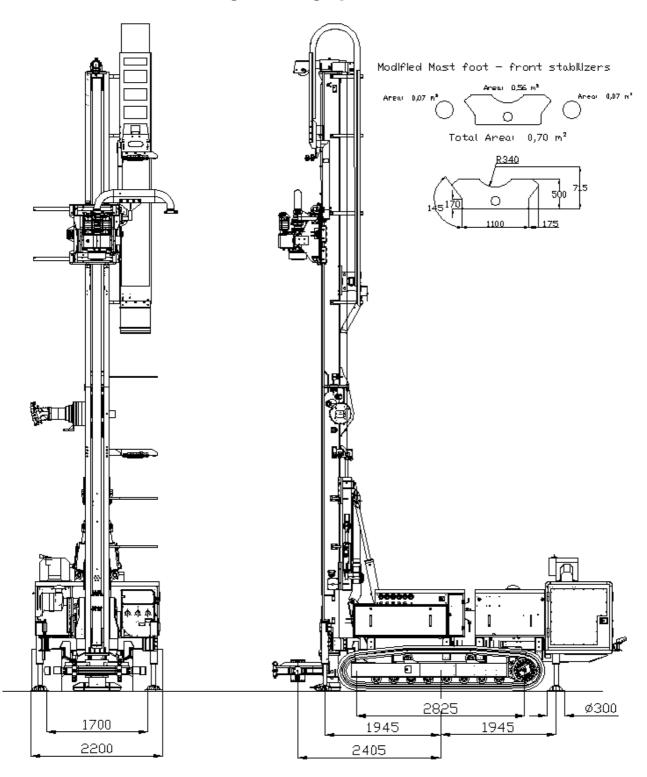


Rev. 00

COLETS HBR204

H204UT0107 - H204UT0108

HBR204MP - COLETS Rig Loading Spreadsheet





Date: 21/05/2014 Rev. 00

COLETS HBR204 H204UT0107 – H204UT0108

	Rig Manufacturer :	CASAGRANDE SPA	Rig Type:	HBR204_s/n H204UT01
		Operation mode:	W.R. 2,4 m	
Completed by:	Ing. Fabiano Ceron	21/05/2014	Checked by:	Ing. Giorgio Michelaz
ain Component	s:			
-	Item	Mass (kg)	Moment arm (m)	Moment (kNm)
	1			0,00
	Mast Assembly+clamps	4090	1,88	75,27
UPPER WORKS	+cathead+winch			0,00
Ş	- Channel	500	0.40	0,00
œ	safety guards	500	2,40	11,77
<u>.</u>	Mast assembly in travel	0	0,82	0,00
-	complete with clamps safety guards	U	0,02	0,00
	and accessories (20° tilted backward)			0,00
	, ,			0,00
LOWER WORKS	Upperstructure and undercarriage	8880	-0,37	-31,80
8				0,00
Ĕ E	Upperstructure and undercarriage	0	-0,41	0,00
§.	(20° tilted backward)			0,00
				0,00
ROPE / KELLY / CHAN SUSPENDED EQUIPMENT	rotary with accessories	1950	2,28	43,65
A S S S	tools (augers,rods)	1000	2,40	23,57
구유	rotary 20° backward	0	-0,60	0,00
ទី ១	tools (augers, rods etc) 20° backward	0	1,06	0,00
	counterweight	280	-2,54	-6,99
SUNT.				0,00
8				0,00
m².	None	0	0,00	0,00
O H H				0,00
6				0,00
		Main Components Totals		
	UPPER WORKS	4590	1,93	87,04
	LOWER WORKS	8880	-0,37	-31,80
ROPE / KELLY	/ CHAIN SUSPENDED EQUIPMENT	2950	2,32	67,23
	COUNTERWEIGHT	280	-2,54	-6,99
	OTHER	0	0,00	0,00
	TOTAL	16700	0,70	115,49
	•	Tracks		•
	Track bearing length (m)	2,825		
	Track pad width (m)	0,5		
Dieta	ance between centrelines of tracks (m)	1,70		
Dista	uice between centrelines of tracks (III)	Front Foot Pads		
	D-4D(-2)		Actual Dimensions	anasial most feet 0.70
	Pad Bearing Area (m²)	0,70	Actual Dimensions	special mast foot 0,70
	Pad Maximum Loading (kN)	300,00	Actual Shape	polygonal + circular
	Pad Moment Arm (m)	1,94		
		Rear Foot Pads		
	Pad Bearing Area (m ²)	0,14	Actual Dimensions	dia 300mm
	Pad Maximum Loading (kN)	300,00	Actual Shape	circular
	Pad Moment Arm (m)	-1,94		
		Forces		
	Maximum Extraction Force (kN)	150,00		
	Maximum Penetration Force (kN)	150,00		
	Maximum Auxillary Force (kN)	20.00	Auxillary Force Moment Arm (m)	3,20
ote: The disclain all tables in this	er on the first worksheet applies workbook	FPS	Notes No limits on working practice INPUT PAGE FOR STANDING-I PENETRATING-EXTRACTING	Andrews (University)





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CASAGRANDE SPA	Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)				Mode :	W.R.	2,4 m	Standing				Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load	
H204UT0107					•••			Bearing	Bearing	Bearing	Bearing		ck loading nsions	cent	-
Lower Works	8880	-0,365	-32				Relative Angle - Upper Body	pressure at	pressure at	pressure at	pressure at	ecc	Bearing	Equivaler	nt Rearing
Counterweight	280	-2,544	-7				and Tracks	front of L.H.	rear of L.H. track	front of R.H. track	rear of R.H. track	(m)	Len. (m)	· ·	Q (KPa)
Upper Works	4590	1,933	87	l I		1	(degrees)	(kN/m^2)	(kN/m^2)	(kN/m^2)	(kN/m^2)	(111)	Len. (m)	L (III)	C (iti u)
Other	0	0,000	0	\			0	154	0	154	0	0,705	2,123	1,415	116
Rope / Kelly / Chain Suspended	2950	2,323	67				0	154	0	154	0	0,705	2,123	1,415	116
Machine Weight (kg)	16700	0,705	115				0	154	0	154	0	0,705	2,123	1,415	116
				Force (kN)	Max. (kN)		0	154	0	154	0	0,705	2,123	1,415	116
Auxiliary Line (kgf)	0	3,200	0	0,00	20,00		0	154	0	154	0	0,705	2,123	1,415	116
Net Extraction Force (kgf)	0	2,323	0	0,00	150,00	Foot Pad Area (m2)	0	154	0	154	0	0,705	2,123	1,415	116
Net Penetration Force (kgf)	0	2,323	0	0,00	150,00	, , , , , , , , , , , , , , , , , , , ,	0	154	0	154	0	0,705	2,123	1,415	116
Front Foot Pads Loading (kgf)	0	1,944	0	0,00	300,00	0,700	Front	Foot Pads E	Equivalent Le	ngth (m)and	Bearing Pres	ssure (kN/m	^2)	1,400	0
Rear Foot Pads Loading (kgf)	0	-1,943	0	0,00	300,00	0,141	Rear	Foot Pads E	Equivalent Le	ngth (m)and	Bearing Pres	ssure (kN/m	^2)	0,283	0
Others	0	0,000	0	Track Bearin	g Length (m)	2,825				Maximu	m Equivak	ent Desig	n Values	1,415	116
Track Total Loading (kgf)	16700	0,705	115	Track Width	Centres (m)	1,700									
				Track pad	width (m)	0,500						BRE LC	AD CASE	(1 or 2)	1
FPS	Auxiliary Line Extraction For Penetration Fo Front Foot Pad Rear Foot Pad	ce OK orce OK I Force OK													



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CASAGRANDE SPA	Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)				Mode :	W.R.	2,4 m		Hand	Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load			
H204UT0107												Max Trac	k loading		triod
Lower Works	8880	-0,365	-32		•		Relative Angle - Upper Body		Bearing pressure at	Bearing pressure at		ecc	Bearing	Equivalor	nt Bearing
Counterweight	280	-2,544	-7				and Tracks	front of L.H. track	rear of L.H. track	front of R.H. track	rear of R.H. track	(m)	Len. (m)		Q (KPa)
Upper Works	4590	1,933	87	┪ .		.	(degrees)	(kN/m^2)	(kN/m^2)	(kN/m^2)	(kN/m^2)	(111)	Len. (m)	L (III)	Q (Ki a)
Other	0	0,000	0	1		- Contract	0	103	0	103	0	0,574	2,516	1,677	77
Rope / Kelly / Chain Suspended	2950	2,323	67				0	103	0	103	0	0,574	2,516	1,677	77
Machine Weight (kg)	16700	0,705	115			_	0	103	0	103	0	0,574	2,516	1,677	77
				Force (kN)	Max. (kN)		0	103	0	103	0	0,574	2,516	1,677	77
Auxiliary Line (kgf)	2039	3,200	64	20,00	20,00		0	103	0	103	0	0,574	2,516	1,677	77
Net Extraction Force (kgf)	0	2,323	0	0,00	150,00	Foot Pad Area (m2)	0	103	0	103	0	0,574	2,516	1,677	77
Net Penetration Force (kgf)	0	2,323	0	0,00	150,00	, ,	0	103	0	103	0	0,574	2,516	1,677	77
Front Foot Pads Loading (kgf)	-5505	1,944	-105	54,00	300,00	0,700	Front	Foot Pads I	Equivalent Le	ngth (m)and	Bearing Pre	ssure (kN/m	^2)	1,400	77
Rear Foot Pads Loading (kgf)	0	-1,943	0	0,00	300,00	0,141	Rear	Foot Pads E	Equivalent Le	ngth (m)and	Bearing Pres	ssure (kN/m	^2)	0,283	0
Others	0	0,000	0	Track Bearin	g Length (m)	2,825				Maximu	m Equival	ent Desig	n Values	1,677	77
Track Total Loading (kgf)	13234	0,574	75	Track Width	Centres (m)	1,700									
				Track pad	width (m)	0,500						BRE LO	AD CASE	(1 or 2)	1
FPS	Auxiliary Line Extraction For Penetration For Front Foot Pac Rear Foot Pad	ce OK orce OK I Force OK													



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CASAGRANDE SPA	Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)	- - -			Mode:	W.R.	2,4 m		Penet	Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load			
H204UT0107													ck loading		ntriod
					1-1		Relative Angle	Bearing	Bearing	Bearing	Bearing				
Lower Works	8880	-0,365	-32				- Upper Body	pressure at front of L.H.	pressure at rear of L.H.	pressure at front of	pressure at rear of R.H.		Bearing	Equivale	nt Bearing
Counterweight	280	-2,544	-7				and Tracks (degrees)	track	track	R.H. track	track	(m)	Len. (m)	L (m)	Q (KPa)
Upper Works	4590	1,933	87	Í		<u>.</u>	(dogrood)	(kN/m^2)	(kN/m^2)	(kN/m^2)	(kN/m^2)				
Other	0	0,000	0	1 \		_	0	0	237	0	237	-1,289	0,372	0,248	177
Rope / Kelly / Chain Suspended	2950	2,323	67				0	0	237	0	237	-1,289	0,372	0,248	177
Machine Weight (kg)	16700	0,705	115				0	0	237	0	237	-1,289	0,372	0,248	177
				Force (kN)	Max. (kN)		0	0	237	0	237	-1,289	0,372	0,248	177
Auxiliary Line (kgf)	0	3,200	0	0,00	20,00		0	0	237	0	237	-1,289	0,372	0,248	177
Net Extraction Force (kgf)	0	2,323	0	0,00	150,00	Foot Pad Area (m2)	0	0	237	0	237	-1,289	0,372	0,248	177
Net Penetration Force (kgf)	-9678	2,323	-221	66,00	150,00	- · · · · · · · · · · · · · · · · · · ·	0	0	237	0	237	-1,289	0,372	0,248	177
Front Foot Pads Loading (kgf)	0	1,944	0	0,00	300,00	0,700	Front	t Foot Pads I	Equivalent Le	ength (m)and	Bearing Pre	ssure (kN/m	^2)	1,400	0
Rear Foot Pads Loading (kgf)	-2538	-1,943	48	24,90	300,00	0,141	Rear	r Foot Pads I	Equivalent Le	ngth (m)and	Bearing Pre	ssure (kN/m	^2)	0,283	176
Others	0	0,000	0	Track Bearin	g Length (m)	2,825				Maximu	m Equival	ent Desig	n Values	0,248	177
Track Total Loading (kgf)	4484	-1,289	-57	Track Width	Centres (m)	1,700							_		7
				Track pac	l width (m)	0,500						BRELC	AD CASE	(1 or 2)	2
	A	F 01/													
	Auxiliary Line Extraction For														
(FPS)	Penetration Fo	orce OK					with current cir	cular shape	dia 300mm ⁻						
	Front Foot Pad														
	Rear Foot Pad	Force OK													
Walk Comment															



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CASAGRANDE SPA	Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)				Mode:		Extra	Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load					
H204UT0107													k loading		ntriod
Lower Works	8880	-0,365	-32		122		Relative Angle - Upper Body	Bearing pressure at	Bearing pressure at	Bearing pressure at	Bearing pressure at		Bearing	Egyiyala	nt Bearing
Counterweight	280	-2,544	-7	П			and Tracks	front of L.H. track	rear of L.H. track	front of R.H. track	rear of R.H. track	ecc (m)	Len. (m)	L (m)	Q (KPa)
Upper Works	4590	1,933	87	4		*	(degrees)	(kN/m/2)	(kN/m^2)	(kN/m^2)	(kN/m^2)	(111)	Len. (m)	L (III)	Q (KPa)
Other	0	0,000	0			b¥.	0	241	0	241	0	0,967	1,335	0,890	181
Rope / Kelly / Chain Suspended	2950	2,323	67				0	241	0	241	0	0,967	1,335	0,890	181
Machine Weight (kg)	16700	0,705	115				0	241	0	241	0	0,967	1,335	0,890	181
				Force (kN)	Max. (kN)		0	241	0	241	0	0,967	1,335	0,890	181
Auxiliary Line (kgf)	0	3,200	0	0,00	20,00		0	241	0	241	0	0,967	1,335	0,890	181
Net Extraction Force (kgf)	12341	2,323	281	150,00	150,00	Foot Pad Area (m2)	0	241	0	241	0	0,967	1,335	0,890	181
Net Penetration Force (kgf)	0	2,323	0	0,00	150,00		0	241	0	241	0	0,967	1,335	0,890	181
Front Foot Pads Loading (kgf)	-12640	1,944	-241	124,00	300,00	0,700	Fron	nt Foot Pads E	quivalent Ler	ngth (m)and E	Bearing Pres	sure (kN/m^	2)	1,400	177
Rear Foot Pads Loading (kgf)	0	-1,943	0	0,00	300,00	0,141	Rea	r Foot Pads E	quivalent Len	gth (m)and E	Bearing Press	sure (kN/m/	2)	0,283	0
Others	0	0,000	0	Track Bearin	g Length (m)	2,825				Maximu	m Equivak	ent Desig	n Values	0,890	→ 181
Track Total Loading (kgf)	16400	0,967	156	Track Width	Centres (m)	1,700									
				Track pad	width (m)	0,500						BRE LC	AD CASE	(1 or 2)	2
FPS	Auxiliary Line Extraction For Penetration For Front Foot Pad Rear Foot Pad	ce OK orce OK I Force OK													



Date: 21/05/2014 Rev. 00

COLETS HBR204 H204UT0107 – H204UT0108

	Rig Manufacturer :	CASAGRANDE SPA	Rig Type:	HBR204_s/n H204UT010		
		Operation mode:	W.R. 2,4 m			
Completed by:	Ing. Fabiano Ceron	21/05/2014	Checked by:	Ing. Giorgio Michelazz		
Main Components	s :					
•	Item	Mass (kg)	Moment arm (m)	Moment (kNm)		
	0			0,00		
	Mast Assembly+clamps	0	1,88	0,00		
UPPER WORKS	+cathead+winch			0,00		
ğ				0,00		
œ.	safety guards	0	2,40	0,00		
<u>a</u>	Mast assembly in travel	4590	0,82	0,00 37,10		
-	complete with clamps safety guards	4390	0,82	0,00		
	and accessories (20° tilted backward)			0,00		
	and accessing (20 times packmany)			0,00		
LOWER WORKS	Upperstructure and undercarriage	0	-0,37	0,00		
8				0,00		
e e	Upperstructure and undercarriage	8880	-0,41	-35,54		
No.	(20° tilted backward)			0,00		
2				0,00		
> <u>A</u>	rotary with accessories	0	2,28	0,00		
ROPE / KELLY CHAIN SUSPENDED EQUIPMENT	tools (augers,rods)	0	2,40	0,00		
X H H H				0,00		
F 0 2 5	rotary 20° backward	1950	-0,60	-11,44		
ည္က စား။	tools (augers, rods etc) 20° backward	1000	1,06	10,39		
E	counterweight	280	-2,54	-6,99		
COUNT.				0,00		
ŏ				0,00		
02	None	0	0,00	0,00		
O H H				0,00		
O				0,00		
		Main Components Totals				
	UPPER WORKS	4590	0,82	37,10		
	LOWER WORKS	8880	-0,41	-35,54		
ROPE / KELLY /	CHAIN SUSPENDED EQUIPMENT	2950	-0,04	-1,05		
	COUNTERWEIGHT	280	-2,54	-6,99		
	OTHER	0	0,00	0,00		
	TOTAL	16700	-0,04	-6,48		
	·	Tracks				
	Track bearing length (m)	2.825				
	Track pad width (m)	0,5				
Distan						
DISIA	nce between centrelines of tracks (m)	1,70				
	2	Front Foot Pads				
	Pad Bearing Area (m ²)	0,70	Actual Dimensions	special mast foot 0,70 m		
	Pad Maximum Loading (kN)	300,00	Actual Shape	polygonal + circular		
	Pad Moment Arm (m)	1,94				
		Rear Foot Pads				
	Pad Bearing Area (m ²)	0,14	Actual Dimensions	dia 300mm		
	Pad Maximum Loading (kN)	300,00	Actual Shape	circular		
	Pad Moment Arm (m)	-1,94	, brada chape	on outdi		
	i ad montent/am (m)	Forces				
	Maximum Fide-die F (15)					
	Maximum Extraction Force (kN)	150,00				
	Maximum Penetration Force (kN)	150,00				
	Maximum Auxillary Force (kN)	20,00	Auxillary Force Moment Arm (m)	TO ALL THE STATE OF THE STATE O		
ote: The disclaim o all tables in this v	er on the first worksheet applies workbook	FPS	No limits on working practice INPUT PAGE FOR STANDING-I PENETRATING-EXTRACTING			





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CASAGRANDE SPA	Weight (kg) / Load (kgf)	Distance to CL rotation (m)	Horizontal moment (kNm)				Mode :	W.R.	2,4 m		Trave	Transformation from triangular or trapizoidal to an equivalent rectangular pressure distribution under track maintaining the load			
H204UT0107												Max Trac	k loading sions		itriod
Lower Works	8880	-0,408	-36		•		Relative Angle	Bearing pressure at	Bearing pressure at	Bearing pressure at	Bearing pressure at		۱ .		
Counterweight	280	-2,544	-7				- Upper Body and Tracks	front of L.H.	rear of L.H.	front of	rear of R.H.	ecc	Bearing		nt Bearing
Upper Works	4590	0.824	37	4		<u>*</u>	(degrees)	track (kN/m^2)	track (kN/m^2)	R.H. track (kN/m^2)	track (kN/m^2)	(m)	Len. (m)	L (m)	Q (KPa)
Other	0	0,000	0	4		₩	0	53	63	53	63	0.040	0.005	0.740	00
Rope / Kelly / Chain Suspended		-0,036	-1	П,			0	53	63	53	63	-0,040	2,825	2,746	60
	16700	-0,040	-6				0	53	63	53	63	-0,040	2,825	2,746	60
Machine Weight (kg)	10700	-0,040	-0	Force (kN)	Max. (kN)	1	0	53				-0,040	2,825	2,746	60
A 1 i (1	•	2.000	•	. ,	. ,		-		63	53	63	-0,040	2,825	2,746	60
Auxiliary Line (kgf)	0	3,200	0	0,00	20,00	Foot Pad	0	53	63	53	63	-0,040	2,825	2,746	60
Net Extraction Force (kgf)	0	-0,036	0	0,00	150,00	Area (m2)	0	53	63	53	63	-0,040	2,825	2,746	60
Net Penetration Force (kgf)	0	-0,036	0	0,00	150,00		0	53	63	53	63	-0,040	2,825	2,746	60
Front Foot Pads Loading (kgf)	0	1,944	0	0,00	300,00	0,700	Front	t Foot Pads I	Equivalent Le	ength (m)and	Bearing Pre	ssure (kN/m	^2)	1,400	0
Rear Foot Pads Loading (kgf)	0	-1,943	0	0,00	300,00	0,141	Rear	Foot Pads E	Equivalent Le	ngth (m)and	Bearing Pres	ssure (kN/m [/]	2)	0,283	0
Others	0	0,000	0	Track Bearin	g Length (m)	2,825				Maximu	m Equival	ent Desig	n Values	2,746	60
Track Total Loading (kgf)	16700	-0,040	-6	Track Width	Centres (m)	1,700									
				Track pad	width (m)	0,500						BRE LO	AD CASE	(1 or 2)	1
FPS	Auxiliary Line Extraction For Penetration Fo Front Foot Pad Rear Foot Pad	e OK rce OK Force OK													