

1. Forces on Guide Rail:

1.1 Forces on car guide rail

GQ [kg]	Rail force in traveling section*		Rail force in shaft pit and head section**	
	FF1car [N]	FF2car [N]	FF1car [N]	FF2car [N]
535	835	517	835	517
625	1'115	604	1'115	604
675	1'205	703	1'205	703

* FF1 and FF2 values based on load case car safety braking_phase I (CSB_I; n=3.5)

** FF1 and FF2 values based on load case car buffer impact_phase I (CBI_I; n=3.5)

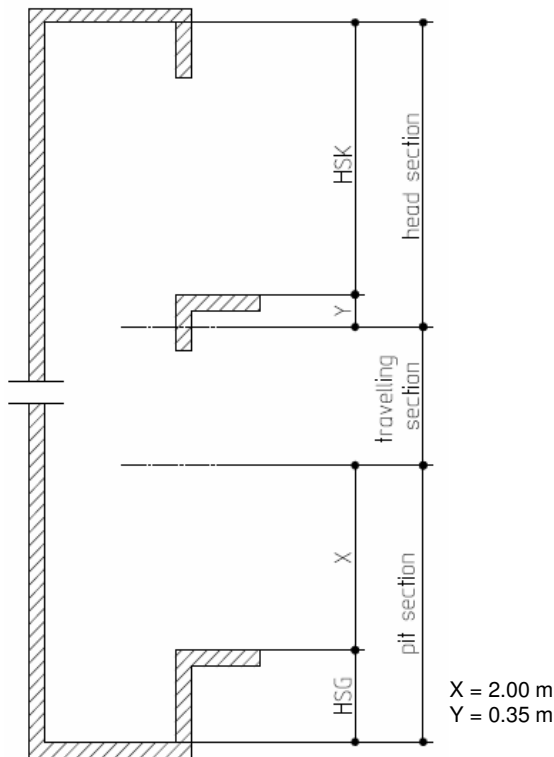
1.2 Forces on counterweight guide rail

GQ [kg]	Rail force in traveling section*		Rail force in shaft pit and head section**	
	FF1cw [N]	FF2cw [N]	FF1cw [N]	FF2cw [N]
535	117	31	137	36
625	133	35	155	41
675	145	38	169	44

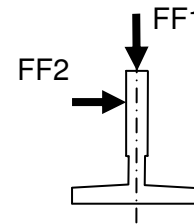
* FF1 and FF2 values based on load case car safety braking_phase II (CSB_II; n=3.0)

** FF1 and FF2 values based on load case counterweight buffer impact_phase I (WBI_I; n=3.5)

Shaft section definition:



Guide shoe forces:



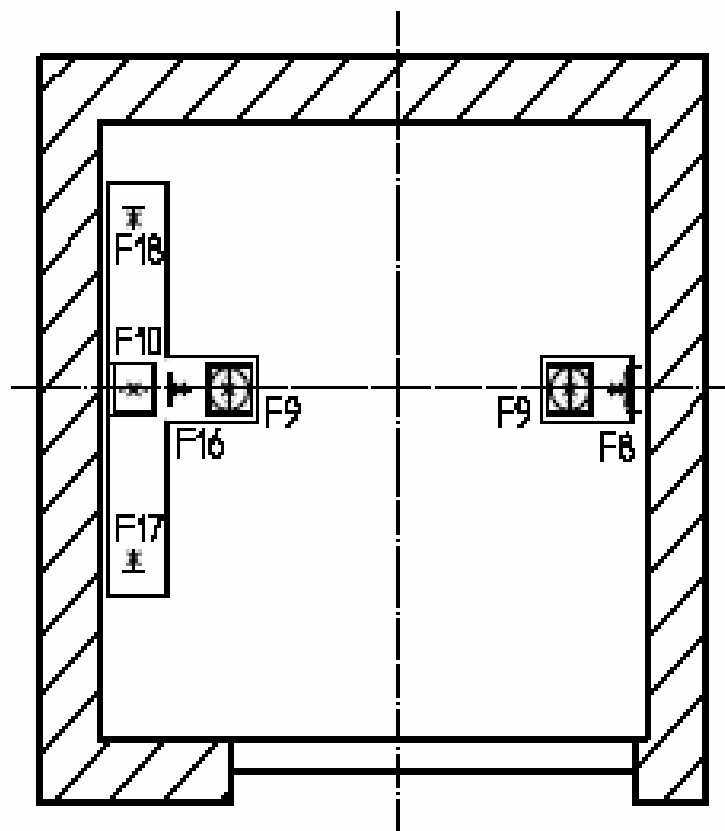
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KA No.	150943	158203							Reviewed	29.06.07	moeripe	
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Forces on Shaft								Remark				
S3100-EU								Replaces / Mod.	Basis Drawing	No Pg.	Format	
INVENTIO AG CH-6052 Hergiswil								Classification	Lead Office	J 41311867	Page	Lang.
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Form EB182-008 E02A (WinWord)

2. Forces on Shaft Pit

Force Nr.	Force Position	GQ [kg]		
		535	625	675
F8	Force of car guide rail GB side	21,9 kN	24,3 kN	26,0 kN
F9	Force of car buffer	19,3 kN	22,1 kN	24,0 kN
F10	Force of cwt buffer	26,1 kN	29,4 kN	32,2 kN
F16	Force of car guide rail drive side	25,0 kN	28,1 kN	30,4 kN
F17, F18	Force of cwt guide rail drive side without safety	3,6 kN	3,9 kN	4,2 kN
Number of buffers				
car side		2		
counterweight side		1		



Comments:

- Forces of guide rails (F8, F16-18) and forces of buffers (F9, F10) do not act simultaneously. Therefore for structural analysis the figures must not be added up.
- Force calculations are based on: SIM 2005.032/B02 (Load Document S3100)
SIM 2005.025/B01 (Stress Report Hoistway Material S3100)

Forces on Shaft S3100-EU	KA No. 158203	KA Date 13-07-07	Ae 1	J 41311867	Page 2	Format A4	Lang. EN
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