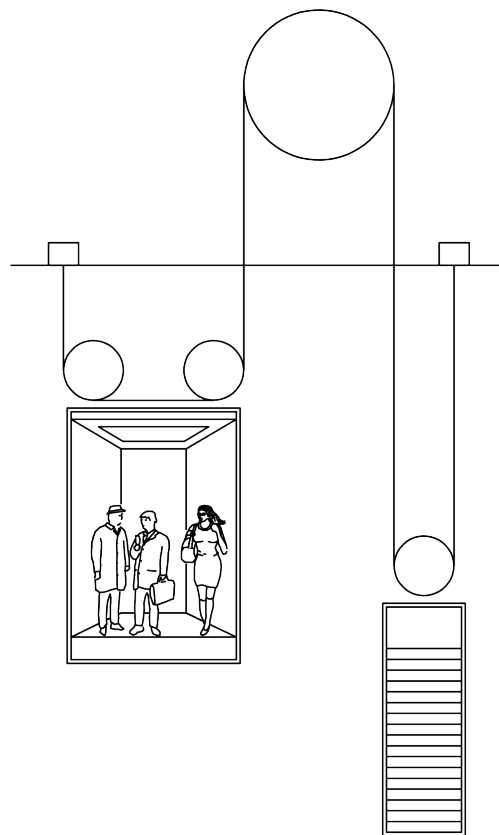


CHARACTERISTICS

PLANT

Machine room position		Top	
Roping		1 : 2	
Compartment efficiency		0,87	
Winding type		CSW	
Expected plant efficiency		0,82	[]
Load	Q	630	[kg]
Car + door + operator weight	P	800	[kg]
CWT balancing		50	[%]
CWT weight	CWT	1.115	[kg]
Cabin speed	Vc	1	[m/s]
Plant travel		30	[m]
Estimated ropes weight		40,5	[kg]
Ropes compensation		0	[%]
Estimated weight of the compensated ropes		0	[kg]
Estimated weight of the compensated ropes tensioner		0	[kg]
Electric cables weight		24	[kg]
Recommended usage categories (VDI4707)		3	[]
Selected usage categories (VDI4707)		3	[]
Duty cycle		35	[%]
Wrapping angle	α	180	[°]
Diverting pulley supported on		Ball bearings	
Average diameter of the guide pulleys		320	[mm]
Main diverting pulley side			
No. of total idler/deflection pulleys		3	[]
Ropes type	GUSTAV WOLF PAWO 819 W - 1770 - CA298		
Ropes resistance class			[N/mm ²]
Rope minimum breaking load		46000	[N]
No. of diverting pulleys with reverse band		0	[]
Inertia of installation (full load)		17,46	[kgm ²]
Inertia of installation (empty)		13,42	[kgm ²]
Calculated rated torque		379,5	[Nm]



The represented drawings is an indication

GEARLESS

Machine model	SG30145BF		
Auxiliary ventilation	Yes		
Traction sheave diameter (\emptyset)	320	[mm]	
Drive pulley width	125	[mm]	
Hardened grooves	Yes		
Ropes	N	5	[]
Ropes diameter	d	8	[mm]
Groove profile type	VSI		
Gamma angle	γ	40	[°]
Beta angle	β	0	[°]
Distance between grooves		12	[mm]
Brake manufacturer and type	MAYR RTW size 350 type 8012		
Brake torque	2 * 410	[Nm]	
TUV certificates reference	EU-BD 845		

MOTOR DATA

Rated speed	120	[rpm]
Rated voltage	360	[V]
Rated frequency	20	[Hz]
Motor poles	20	

REGULATION DATA

Power required	4,78	[kW]
Typ. / Max Operating current	13,22 / 16,03	[A]
Start current at acceleration 0.3 / 0.7 [m/s ²]	15,51 / 18,55	[A]
Installation frequency	19,9	[Hz]
Installation speed	119,4	[rpm]
Start/hour	180	[avv/h]
Machine usage	97,11	[%]

RESCUE CONDITIONS

Estimated system efficiency during emergency	0,90	[]
Min operating voltage at emergency speed	0,3 [m/s]	177 [V]
Max estimated torque during emergency	279,7	[Nm]
Short-circuit maximum torque	275	[Nm]
Speed at shortcircuit maximum torque	0,55	[m/s]

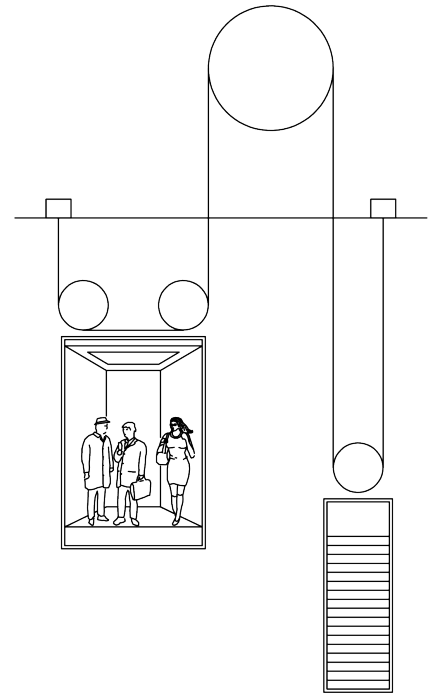
VERIFICATION EN 81-20-50

MACHINE VERIFICATION

Max machine static load		34,34	[kN]
Calculated static load		13	[kN]
Verification	34,34 > 13	VERIFIED	
Maximum torque		538,2	[Nm]
Start torque at acceleration [m/s ²]	0.3	445	[Nm]
Verification	538,2 > 445	VERIFIED	
Maximum short-circuit torque > Maximum estimated torque during emergency		NOT VERIF.	
Maximum car speed during emergency <= 0,3m/s		NOT VERIF.	

ROPES SAFETY

Average bends Diameter		320	[mm]
Kp coefficient	Kp	1	[]
Equal Number	t	10	[]
Equal Number	p	2	[]
Equal Number		12	[]
Ratio between diameters	D / d	40	[]
Specific pressure	7,61 <= 6,83	(EN81.1 : 1985)	
Minimum safety coefficient admissible		19,96	[]
Calculated safety coefficient		31,89	[]
Verification	31,89 > 19,96	VERIFIED	



The represented drawings is an indication

FRICTION

Friction coefficient - car's load	μ	0,1	[]
Friction coefficient - emergency braking	μ	0,0839	[]
Friction coefficient - bound lift	μ	0,2	[]
Friction coefficient - car's load	f	0,2924	[]
Friction coefficient - emergency braking	f	0,2453	[]
Friction coefficient - bound lift	f	0,5848	[]
Max traction - car load	$e^{\mu}fa$	2,51	[]
Max traction - emergency braking	$e^{\mu}fa$	2,16	[]
Max traction - bound lift	$e^{\mu}fa$	6,28	[]

CONDITION: "CAR LOAD OPERATIONS"

Car	Cabin empty down	4321,4	Cabin full down	8183,9		
side	Cabin empty up	4041,8	Cabin full up	7904,4		
Cwt	Cabin empty down	5469	Cabin full down	5469,1		
	Cabin empty up	5866,3	Cabin full up	5866,4		
T1 / T2	Cabin empty down	2,51 > 1,27	VERIFIED	Cabin full down	2,51 > 1,5	VERIFIED
	Cabin empty up	2,51 > 1,45	VERIFIED	Cabin full up	2,51 > 1,35	VERIFIED

CONDITION: "EMERGENCY BRAKING"

			Calculated deceleration [m/s ²]	0,5		
Car	Empty car at the bottom "UP"	4070,4	Full car at the bottom "DOWN"	7819,8		
side	Empty car at the top "UP"	3825,6	Full car at the top "DOWN"	7505,5		
Cwt	Empty car at the bottom "UP"	5753	Full car at the bottom "DOWN"	5185,2		
	Empty car at the top "UP"	6190,6	Full car at the top "DOWN"	5542,2		
T1 / T2	Empty car at the bottom "UP"	2,16 > 1,41	VERIFIED	Full car at the bottom "DOWN"	2,16 > 1,51	VERIFIED
	Empty car at the top "UP"	2,16 > 1,62	VERIFIED	Full car at the top "DOWN"	2,16 > 1,35	VERIFIED

CONDITION: "BLOCKED CAR"

Car	Car at the bottom "DOWN"	397,4	Empty car at the bottom "UP"	4321,3		
side	Car bound at the top "DOWN"	0,1	Empty car at the top "UP"	4041,7		
Cwt	CWT at the top "UP"	5469	Bound CWT at the top "DOWN"	0,1		
	CWT at the top "UP"	5866,3	Bound CWT at the bottom "DOWN"	397,4		
T1 / T2	Car at the bottom "DOWN"	6,28 < 13,76	VERIFIED	Bound cwt. at the top "DOWN"	6,28 < 86425,1	VERIFIED
	Car bound at the top "DOW"	6,28 < 117326,6	VERIFIED	Bound cwt. at the bottom "DOWN"	6,28 < 10,17	VERIFIED