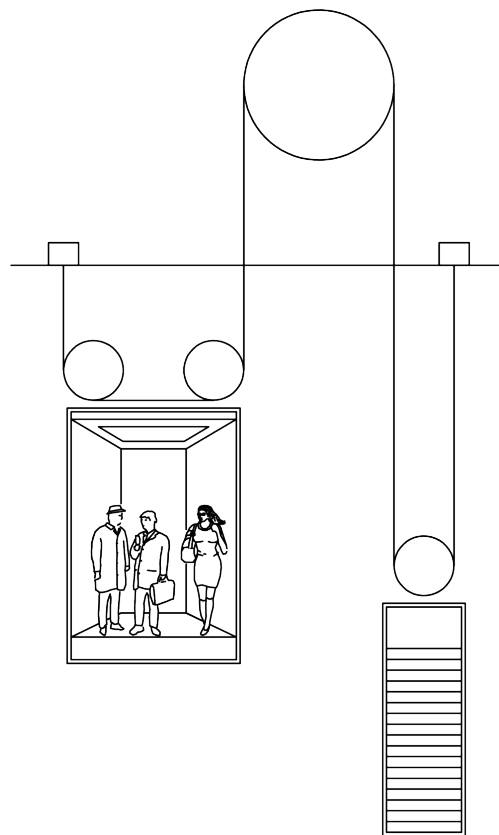


## CHARACTERISTICS

### PLANT

Machine room position		Top	
Roping		1 : 2	
Compartment efficiency		0,87	
Winding type		CSW	
Expected plant efficiency		0,82	[ ]
Load	Q	800	[kg]
Car + door + operator weight	P	950	[kg]
CWT balancing		50	[%]
CWT weight	CWT	1.350	[kg]
Cabin speed	Vc	1,6	[m/s]
Plant travel		30	[m]
Estimated ropes weight		48,6	[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	$\alpha$	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 <sup>2</sup> ]
Rope minimum breaking load		46000	[N]
No. of diverting pulleys with reverse band		0	[ ]
Inertia of installation (full load)		21,34	[kgm <sup>2</sup> ]
Inertia of installation (empty)		16,22	[kgm <sup>2</sup> ]
Calculated rated torque		476,5	[Nm]



The represented drawings is an indication

### GEARLESS

Machine model	SG40185HF		
Auxiliary ventilation	Yes		
Traction sheave diameter ( $\emptyset$ )	320	[mm]	
Drive pulley width	125	[mm]	
Hardened grooves	Yes		
Ropes	N	6	[ ]
Ropes diameter	d	8	[mm]
Groove profile type	VSI		
Gamma angle	$\gamma$	40	[°]
Beta angle	$\beta$	0	[°]
Distance between grooves		12	[mm]
Brake manufacturer and type	MAYR RTW size 600 type 8012		
Brake torque	2 * 600	[Nm]	
TUV certificates reference	EU-BD 1014		

### MOTOR DATA

Rated speed	191	[rpm]
Rated voltage	360	[V]
Rated frequency	31,8	[Hz]
Motor poles	20	

### REGULATION DATA

Power required	9,59	[kW]
Typ. / Max Operating current	20,11 / 29,96	[A]
Start current at acceleration 0.6 / 0.7 [m/s <sup>2</sup> ]	26,86 / 27,99	[A]
Installation frequency	31,8	[Hz]
Installation speed	190,8	[rpm]
Start/hour	180	[avv/h]
Machine usage	92,44	[%]

### RESCUE CONDITIONS

Estimated system efficiency during emergency	0,90	[ ]
Min operating voltage at emergency speed	0,3 [m/s]	107 [V]
Max estimated torque during emergency	351,2	[Nm]
Short-circuit maximum torque	432	[Nm]
Speed at shortcircuit maximum torque	0,32	[m/s]

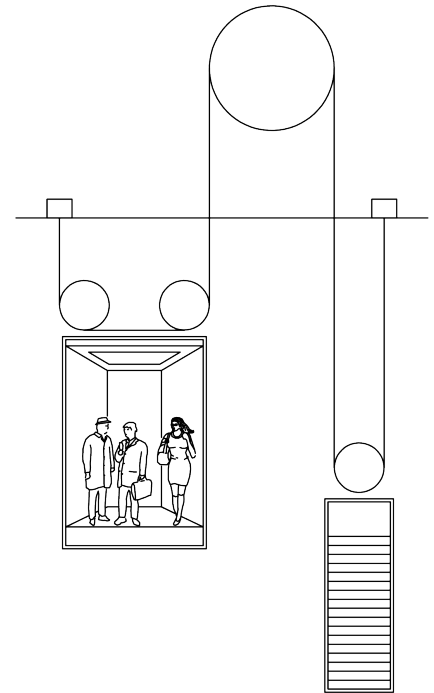
## VERIFICATION EN 81-20-50

### MACHINE VERIFICATION

Max machine static load		34,34	[kN]
Calculated static load		15,8	[kN]
Verification	34,34 > 15,8	<b>VERIFIED</b>	
Maximum torque		830,7	[Nm]
Start torque at acceleration [m/s <sup>2</sup> ]	0.6	636,6	[Nm]
Verification	830,7 > 636,6	<b>VERIFIED</b>	
Maximum short-circuit torque > Maximum estimated torque during emergency		VERIFIED	
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	7,75 <= 6,03	(EN81.1 : 1985)	
Minimum safety coefficient admissible		19,96	[ ]
Calculated safety coefficient		31,28	[ ]
Verification	31,28 > 19,96	<b>VERIFIED</b>	



The represented drawings is an indication

### FRICTION

Friction coefficient - car's load	$\mu$	0,1	[ ]
Friction coefficient - emergency braking	$\mu$	0,0765	[ ]
Friction coefficient - bound lift	$\mu$	0,2	[ ]
Friction coefficient - car's load	f	0,2924	[ ]
Friction coefficient - emergency braking	f	0,2237	[ ]
Friction coefficient - bound lift	f	0,5848	[ ]
Max traction - car load	e <sup>fa</sup>	2,51	[ ]
Max traction - emergency braking	e <sup>fa</sup>	2,02	[ ]
Max traction - bound lift	e <sup>fa</sup>	6,28	[ ]

### CONDITION: "CAR LOAD OPERATIONS"

Car	Cabin empty down	5136,6	Cabin full down	10041,5		
side	Cabin empty up	4777,5	Cabin full up	9682,4		
Cwt	Cabin empty down	6621,7	Cabin full down	6621,8		
	Cabin empty up	7098,5	Cabin full up	7098,6		
T1 / T2	Cabin empty down	2,51 > 1,29	<b>VERIFIED</b>	Cabin full down	2,51 > 1,52	<b>VERIFIED</b>
	Cabin empty up	2,51 > 1,49	<b>VERIFIED</b>	Cabin full up	2,51 > 1,36	<b>VERIFIED</b>

### CONDITION: "EMERGENCY BRAKING"

			Calculated deceleration [m/s <sup>2</sup> ]	0,5		
Car	Empty car at the bottom "UP"	4840	Full car at the bottom "DOWN"	9557		
side	Empty car at the top "UP"	4523,8	Full car at the top "DOWN"	9155,1		
Cwt	Empty car at the bottom "UP"	6964,4	Full car at the bottom "DOWN"	6279,1		
	Empty car at the top "UP"	7489,6	Full car at the top "DOWN"	6707,5		
T1 / T2	Empty car at the bottom "UP"	2,02 > 1,44	<b>VERIFIED</b>	Full car at the bottom "DOWN"	2,02 > 1,52	<b>VERIFIED</b>
	Empty car at the top "UP"	2,02 > 1,66	<b>VERIFIED</b>	Full car at the top "DOWN"	2,02 > 1,37	<b>VERIFIED</b>

### CONDITION: "BLOCKED CAR"

Car	Car at the bottom "DOWN"	476,8	Empty car at the bottom "UP"	5136,5		
side	Car bound at the top "DOWN"	0,1	Empty car at the top "UP"	4777,4		
Cwt	CWT at the top "UP"	6621,7	Bound CWT at the top "DOWN"	0,1		
	CWT at the top "UP"	7098,5	Bound CWT at the bottom "DOWN"	476,8		
T1 / T2	Car at the bottom "DOWN"	6,28 < 13,89	<b>VERIFIED</b>	Bound cwt. at the top "DOWN"	6,28 < 102729,3	<b>VERIFIED</b>
	Car bound at the top "DOW"	6,28 < 141969,32	<b>VERIFIED</b>	Bound cwt. at the bottom "DOWN"	6,28 < 10,02	<b>VERIFIED</b>