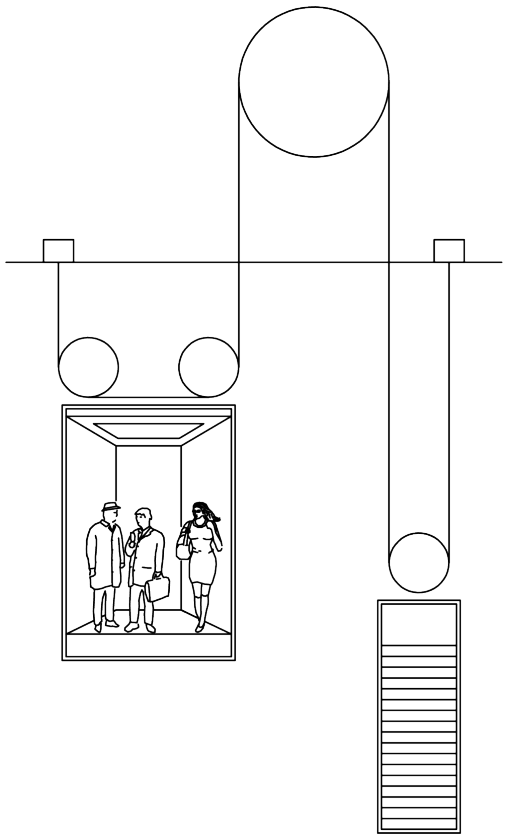
SICOR s.p.a.
SOCIETÀ INDUSTRIALE COSTRUZIONE RIDUTTORI

CHARACTERISTICS

PLANT

Machine room position		Top	
Roping		1 : 2	
Compartment efficiency		0,87	
Winding type		CSW	
Expected plant efficiency		0,82	[ ]
Load	Q	1.000	[kg]
Car + door + operator weight	P	1.200	[kg]
CWT balancing		50	[%]
CWT weight	CWT	1.700	[kg]
Cabin speed	Vc	1,6	[m/s]
Plant travel		30	[m]
Estimated ropes weight		64,8	[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/mm²]
Rope minumum breaking load		46000	[N]
No. of diverting pulleys with reverse band		0	[ ]
Inertia of installation (full load)		26,96	[kgm²]
Inertia of installation (empty)		20,56	[kgm²]
Calculated rated torque		603,4	[Nm]



The represented drawings is an indication

GEARLESS

Machine model		SG48185BF	
Auxiliary ventilation		Yes	
Traction sheave diameter (ø)		320	[mm]
Drive pulley width		125	[mm]
Hardened grooves		Yes	
Ropes	N	8	[ ]
Ropes diameter	d	8	[mm]
Groove profile type		VSI	
Gamma angle	γ	40	[°]
Beta angle	ß	0	[°]
Distance between grooves		12	[mm]
Brake manifacturer and type		MAYR RTW size 600 type 8012	
Brake torque		2 * 600	[Nm]
TUV certificates reference		EU-BD 1014	

MOTOR DATA

Rated speed	195	[rpm]
Rated voltage	360	[V]
Rated frequency	32,5	[Hz]
Motor poles	20	

REGULATION DATA

Power required	12,15	[kW]
Typ. / Max Operating current	26,47 / 41,54	[A]
Start current at acceleration 0.6 / 0.7 [m/s²]	35,33 / 36,81	[A]
Installation frequency	31,8	[Hz]
Installation speed	190,8	[rpm]
Start/hour	180	[avv/h]
Machine usage	89,31	[%]

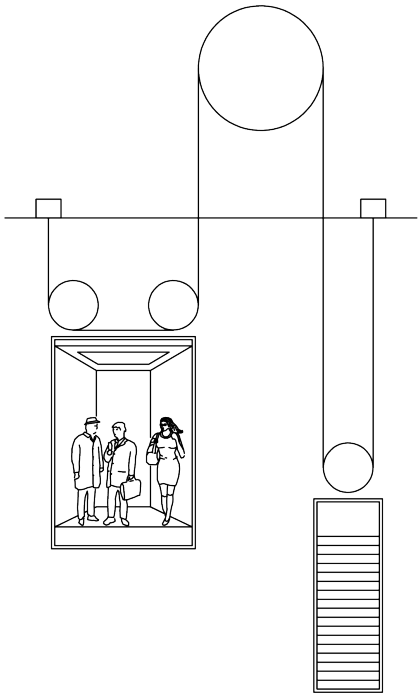
RESCUE CONDITIONS

Estimated system efficiency during emergency		0,90	[ ]
Min operating voltage at emergency speed	0,3 [m/s]	97	[V]
Max estimated torque during emergency		444,7	[Nm]
Short-circuit maximum torque		577	[Nm]
Speed at shortcircuit maximum torque		0,33	[m/s]

VERIFICATION EN 81-20-50

MACHINE VERIFICATION

Max machine static load		34,34	[kN]
Calculated static load		19,88	[kN]
Verification	34,34 > 19,88	VERIFIED	
Maximum torque		1107,99	[Nm]
Start torque at acceleration [m/s²]	0.6	805,6	[Nm]
Verification	1107,99 > 805,6	VERIFIED	
Maximum short-circuit torque > Maximum estimated torque during emergency		VERIFIED	
Maximum car speed during emergency <= 0,3m/s		NOT VERIF.	



The represented drawings is an indication

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	7,33 <= 6,03	(EN81.1 : 1985)	
Minimum safety coefficient admissible		19,96	[ ]
Calculated safety coefficient		33,13	[ ]
Verification	33,13 > 19,96	VERIFIED	

FRICTION

Friction coefficient - car's load	μ	0,1	[ ]
Friction coefficient - emergency braking	μ	0,0765	[ ]
Friction coefficient - bound lift	μ	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^fa	2,51	[ ]
Max traction - emergency braking	e^fa	2,02	[ ]
Max traction - bound lift	e^fa	6,28	[ ]

CONDITION: "CAR LOAD OPERATIONS"

Car side	Cabin empty down		6521,7	Cabin full down		12652,9
	Cabin empty up		6003,8	Cabin full up		12134,9
Cwt	Cabin empty down		8338,5	Cabin full down		8338,6
	Cabin empty up		8974,1	Cabin full up		8974,2
T1 / T2	Cabin empty down	2,51 > 1,28	VERIFIED	Cabin full down	2,51 > 1,52	VERIFIED
	Cabin empty up	2,51 > 1,5	VERIFIED	Cabin full up	2,51 > 1,35	VERIFIED

CONDITION: "EMERGENCY BRAKING"

				Calculated deceleration [m/s²]		0,5
Car side	Empty car at the bottom "UP"		6146,5	Full car at the bottom "DOWN"		12051,9
	Empty car at the top "UP"		5687,6	Full car at the top "DOWN"		11474,9
Cwt	Empty car at the bottom "UP"		8768,7	Full car at the bottom "DOWN"		7908,3
	Empty car at the top "UP"		9468,9	Full car at the top "DOWN"		8479,4
T1 / T2	Empty car at the bottom "UP"	2,02 > 1,43	VERIFIED	Full car at the bottom "DOWN"	2,02 > 1,52	VERIFIED
	Empty car at the top "UP"	2,02 > 1,67	VERIFIED	Full car at the top "DOWN"	2,02 > 1,35	VERIFIED

CONDITION: "BLOCKED CAR"

Car side	Car at the bottom "DOWN"		635,7	Empty car at the bottom "UP"		6521,6
	Car bound at the top "DOWN"		0,1	Empty car at the top "UP"		6003,7
Cwt	CWT at the top "UP"		8338,5	Bound CWT at the top "DOWN"		0,1
	CWT at the top "UP"		8974,1	Bound CWT at the bottom "DOWN"		635,7
T1 / T2	Car at the bottom "DOWN"	6,28 < 13,12	VERIFIED	Bound cwt. at the top "DOWN"	6,28 < 130432,7	VERIFIED
	Car bound at the top "DOW	6,28 < 179482,76	VERIFIED	Bound cwt. at the bottom "DOWN"	6,28 < 9,44	VERIFIED