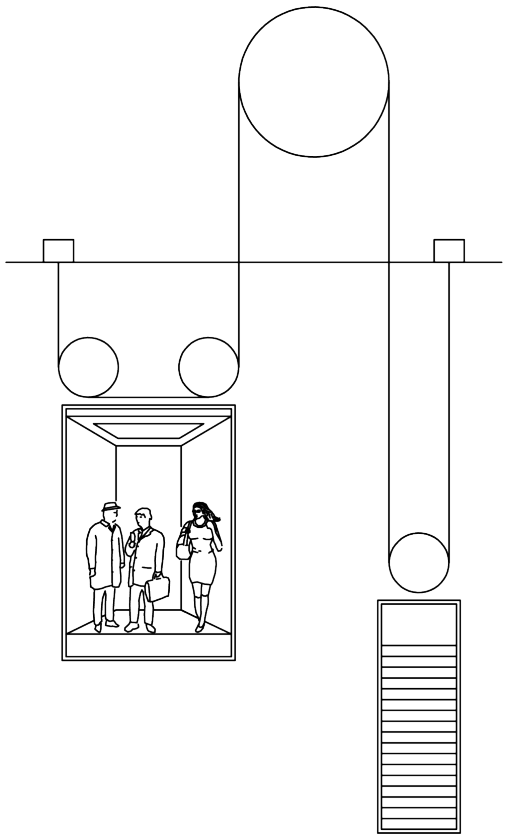
SICOR s.p.a.
SOCIETÀ INDUSTRIALE COSTRUZIONE RIDUTTORI

CHARACTERISTICS

PLANT

Machine room position		Top	
Roping		1 : 2	
Compartment efficiency		0,87	
Winding type		CSW	
Expected plant efficiency		0,82	[ ]
Load	Q	450	[kg]
Car + door + operator weight	P	600	[kg]
CWT balancing		50	[%]
CWT weight	CWT	825	[kg]
Cabin speed	Vc	1	[m/s]
Plant travel		30	[m]
Estimated ropes weight		32,4	[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		0	[N/mm²]
Rope minumum breaking load		46000	[N]
No. of diverting pulleys with reverse band		0	[ ]
Inertia of installation (full load)		12,93	[kgm²]
Inertia of installation (empty)		10,05	[kgm²]
Calculated rated torque		277,8	[Nm]



The represented drawings is an indication

GEARLESS

Machine model		SG22145BF	
Auxiliary ventilation		Yes	
Traction sheave diameter (ø)		320	[mm]
Drive pulley width		125	[mm]
Hardened grooves		Yes	
Ropes	N	4	[ ]
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 250 type 8012	
Brake torque		2 * 280	[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	3,5	[kW]
Typ. / Max Operating current	9,32 / 11,74	[A]
Start current at acceleration 0.3 / 0.7 [m/s²]	10,95 / 13,12	[A]
Installation frequency	19,9	[Hz]
Installation speed	119,4	[rpm]
Start/hour	180	[avv/h]
Machine usage	96,91	[%]

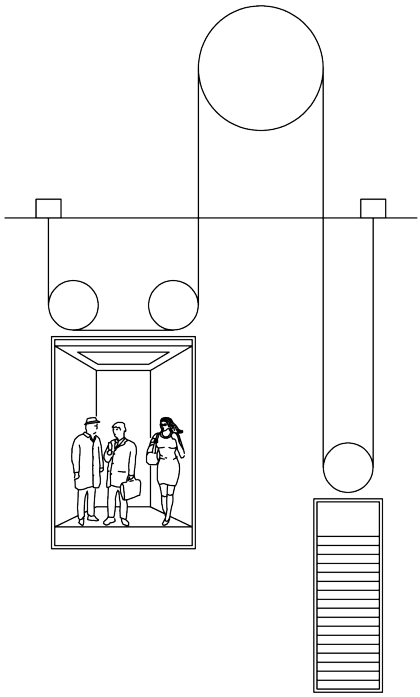
RESCUE CONDITIONS

Estimated system efficiency during emergency		0,90	[ ]
Min operating voltage at emergency speed	0,3 [m/s]	187	[V]
Max estimated torque during emergency		204,7	[Nm]
Short-circuit maximum torque		206	[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		9,63	[kN]
Verification	34,34 > 9,63	VERIFIED	
Maximum torque		409,5	[Nm]
Start torque at acceleration [m/s²]	0.3	326,2	[Nm]
Verification	409,5 > 326,2	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	7,02 <= 6,83	(EN81.1 : 1985)	
Minimum safety coefficient admissible		19,96	[ ]
Calculated safety coefficient		34,66	[ ]
Verification	34,66 > 19,96	VERIFIED	

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^fa	2,51	[ ]
Max traction - emergency braking	e^fa	2,16	[ ]
Max traction - bound lift	e^fa	6,28	[ ]

CONDITION: "CAR LOAD OPERATIONS"

Car side	Cabin empty down		3260,9	Cabin full down			6019,9
	Cabin empty up		3060,8	Cabin full up			5819,7
Cwt	Cabin empty down		4046,6	Cabin full down			4046,7
	Cabin empty up		4364,4	Cabin full up			4364,5
T1 / T2	Cabin empty down	2,51 > 1,24	VERIFIED	Cabin full down		2,51 > 1,49	VERIFIED
	Cabin empty up	2,51 > 1,43	VERIFIED	Cabin full up		2,51 > 1,33	VERIFIED

CONDITION: "EMERGENCY BRAKING"

				Calculated deceleration [m/s²]			0,5
Car side	Empty car at the bottom "UP"		3068,1	Full car at the bottom "DOWN"			5773,4
	Empty car at the top "UP"		2894,6	Full car at the top "DOWN"			5546,6
Cwt	Empty car at the bottom "UP"		4258	Full car at the bottom "DOWN"			3835,2
	Empty car at the top "UP"		4608,1	Full car at the top "DOWN"			4120,9
T1 / T2	Empty car at the bottom "UP"	2,16 > 1,39	VERIFIED	Full car at the bottom "DOWN"		2,16 > 1,51	VERIFIED
	Empty car at the top "UP"	2,16 > 1,59	VERIFIED	Full car at the top "DOWN"		2,16 > 1,35	VERIFIED

CONDITION: "BLOCKED CAR"

Car side	Car at the bottom "DOWN"		317,9	Empty car at the bottom "UP"			3260,8
	Car bound at the top "DOWN"		0,1	Empty car at the top "UP"			3060,7
Cwt	CWT at the top "UP"		4046,6	Bound CWT at the top "DOWN"			0,1
	CWT at the top "UP"		4364,4	Bound CWT at the bottom "DOWN"			317,9
T1 / T2	Car at the bottom "DOWN"	6,28 < 12,73	VERIFIED	Bound cwt. at the top "DOWN"		6,28 < 65215,88	VERIFIED
	Car bound at the top "DOW	6,28 < 87288,38	VERIFIED	Bound cwt. at the bottom "DOWN"		6,28 < 9,63	VERIFIED