TECHNICAL INFO
VIALE SISTEMI PRODUCTS

FORCE COUPLE

The data reported in our catalogue are real, as we reckoned the factoring of the gearbox's efficiency.
Said data must be equal or superior to the force couple necessary for the use.

THE SERVICE FACTOR

As the gearmotor is subjected to a continuous load, it is opportune to act at the moment of the choice of the model, considering the correct coefficient (the service factor*) to be appraised on the real conditions of usage.

PARAMETERS

The essential parameters in order to choose the right gearmotor are:

- Torque Nm
- Service factor* "f"
- Project torque = Nm x f
- Shaft speed [rpm]
- Gear train reduction ratio
- Gearmotor efficiency

SUGGESTIONS

The installation engineer/operator will have to consider also the following information:

- Type of vent or system to be driven
- Temperature
- Altitude
- Vent dimensions (length, weight, type)
- Rack's position (refer to the Technical Info on the optimal position for the racks) – setting of the gearmotor (this is important in order for the gearmotor to remain well lubricated).
- Vent's length and tube's thickness

SERVICE FACTOR "f"			
Duration h/d	< 2 h	2-8 h	8-12 h
Starters/h <10	0,9	1	1,12
Starters/h >10	1	1,25	1,5

DUTY CYCLE OF ELECTRIC MOTOR

S1: Continuous service: operation at constant load of sufficient duration for thermal equilibrium to be reached.
S2: Short-time duty: operation at constant load during a given time, less than that required to reach thermal equilibrium, followed by a rest and de-energised period of sufficient duration to re-establish machine temperatures within 2 K of the coolant.
S3: Intermittent periodic duty: a sequence of identical duty cycles, each including a period of operation at constant load and a rest and de-energised period. In this duty, the cycle is such that the starting current does not significantly affect the temperature rise.
The other service classes are omitted as they are not pertinent to typical greenhouse operations such as windows opening and handling of thermal/shading screens.

The electric motors used by Viale Sistemi comply with CE regulations and are considered duty Type S3 - 70% (intermittent periodic duty) in compliance with the classification of new Std. IEC 60034-1.

INFLUENCE OF TEMPERATURE AND ALTITUDE ON MOTOR POWER

The powers indicated are meant for standard use at altitudes below 1000m above sea level and a room temperature ranging between +5° C and +40° C. For temperatures over 40° C and altitudes, ref. to Table [1] and [2], decreasing PN power by the indicated percentages.

T°C	40	45	50	55	60
PN %	100	96	92	87	82

Altitude	1000	1500	2000	2500	3000
PN %	100	98	95	92	88

Altitude	3500	4000	4500
PN %	84	80	74