

Electronic tubular motors and control systems
for roller shutters and awnings.

New freedom for your home!



**Tubular motor CONTROL –
with integrated radio receiver
and timer.**



- Cost efficient – no additional timer or relay needed
- Ideal for retrofitting, almost no wiring necessary
- Protection against burglars, provides privacy, plus reduction of heating costs
- Protects plants and furniture from fading



For more convenience and security!

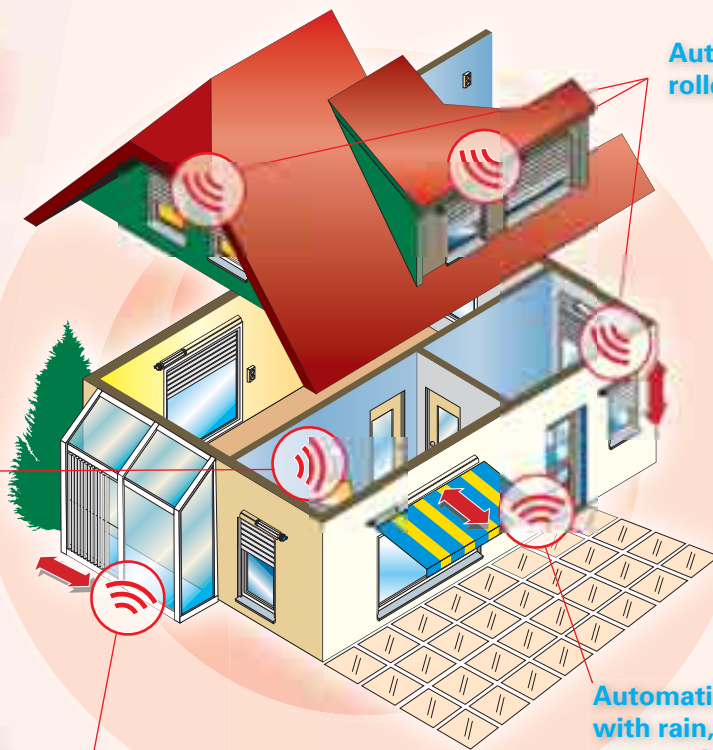
Electronic tubular motors + control systems

The sophisticated system for more convenience!

Controls all roller shutters, awnings, lighting
and many electronic devices automatically!

More security and
convenience all
around your home!

Automation
of lighting.



Automation of
roller shutters.

Automation of awnings
with rain, wind and sun
automatic.

Automation of vertical
lamellae and blinds.



● More convenience and quality of life

Automatically controlled roller shutters provide more comfort and ease your everyday life.



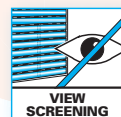
● Random feature

Simulates an occupied home during your absence. More security and protection against burglars.



● Sun automatic

Closes your roller shutters in case of strong sunlight and thereby keeps heat out and protects furniture and plants.



● View screening

Twilight automation closes the roller shutters at nightfall (Twilight automation).



● Time control

- Weekday and weekend program
- Random feature
- ASTRO-program



● ASTRO-Program

Depending on your geographical position (defined by postcode) in Europe the ASTRO-program closes your roller shutters at twilight. Reduction of heating costs.



For more convenience and security!

The new intelligent radio tubular motor CONTROL. The only one with integrated FERNOTRON intelligence!

- **Intelligence and Convenience**

- easy setting of end positions via radio
- grouping – easy and practical
- all comfort characteristics of an intelligent timer integrated

- **Cost efficiency**

- no additional timer needed
- no complicated wiring
- ONE sun sensor controls all motors

- **Security**

- Random feature deters burglars
- Obstacle detection
- Security cut-off (to protect roller shutter e.g. from freezing)
- Manual operation by switch possible at all times

**Integrated
radio receiver
and timer.**



**Control your roller shutters conveniently
via radio from now on!**

**Radio remote control
easy Comfort (2406)**

Program all important functions of a group with the radio control easy Comfort conveniently. easy Comfort offers all comfort characteristics of a modern timer.

**Radio remote control
easy Standard (2431)**

A simple remote control to operate single drives.

FERNOTRON® (2411)

The intelligent radio based control system.

The programming centre Comfort of the FERNOTRON® product line offers control of up to 49 receivers divided in 7 groups. Many comfortable FERNOTRON®-functions turn this programming centre into a multifunctional tool to ease your everyday life.



For more convenience and security!

Electronic tubular motors + control systems

The *original* electronic tubular motor by RADEMACHER offers you many advantages!

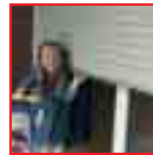
1.) Setting of end positions – easily and electronically

Troll 50 and FERNOTRON (or set cable 4090) enable the adjustment of end positions anytime without opening the roller shutter box.



2.) Direct parallel switching of up to 3 tubular drives without relay!

Save money and space! You can connect up to 3 tubular motors of series to one TROLL (not applicable for radio tubular motors).



3.) Increased security with electronic obstacle detection!

Our tubular motors are optionally equipped with a high-class electronic obstacle detection. Important especially for terrace-doors.



4.) Security cut-off

Dynamic security cut-off protects frozen or jammed roller shutters from damage!

FERNOTRON® – the intelligent control system for home and garden!

Cost efficient and easy retrofitting!

- Complete environmental control for more convenience and security
- Up to 49 receivers can be controlled divided in 7 groups
- Circuit times are stored in the receiver
- menu-guided operation
- DCF-clock with automatic summer/wintertime changeover
- automatic control of roller shutters, light, and several of electrical appliances



For more convenience and security!

The innovative roller shutter control for nearly all frames.

TROLL S50 (Standard):

- Easy adjustment of end positions without opening the roller shutter box*
- Time control and manual operation
- Automatic summer/winter time changeover
- Grouping for central control possible

TROLL C50 (Comfort) Additional features:

- Time control and change between weekday and weekend program.
- Sun automatic: protection against heat and sunlight
- Twilight automatic: By light: with sun/twilight sensor
By time: with ASTRO-function (postcode)
- Random control simulates presence
- Adjustment of running time to lower the roller shutters individually
- Infrared remote control
- Reverse automatic to fan out blinds
- Inching mode for gradual adjustment of blinds
- Key pad lock

TROLL C50-3D ideal for the easy exchange of a regular switch to a time control:

- Connection without neutral lead (3-wire-technique)
- Has the same functions as the TROLL C50 (except for the adjustment of end positions)

*applicable to all RADEMACHER tubular motors (starting year of construction 2000)



Fits in many popular frames with a 50 x 50 mm opening.

Infrared



No neutral lead needed! Replace a simple switch with a TROLL C50-3D without laying a neutral lead.

NO DIRT, LITTLE EFFORT!

MODI® – compatible with all RADEMACHER tubular motors!

Infrared

- Easy to install in existing belt boxes
- Closes the existing hole in the wall
- Group and central control with TROLL and MODI in combination possible
- Time control with weekly program
- Summer/winter time changeover at the push of a button
- Control with infrared remote control possible



easy and easy Comfort are small and handy!

- UP and DOWN at the push of a button
- easy Comfort incl. daily, weekly and random program
- easy Comfort incl. sun/twilight automatic and summer/winter time changeover at the push of a button



easy Standard

easy Comfort

For more convenience and security!



Easy installation!



1: Lower roller shutter, open roller shutter box.



2: Disassemble old belt winder.



3: Align and install drive bearing motor sided.



4: Align and install thrust bearing.



5: Slide motor into the octagonal steel shaft.



6: IMPORTANT! Slide on octagonal steel shaft onto the adapter up to the catch.



7: Insert plastic case into steel shaft.



8: Hang up shaft in drive bearing and secure with split-pin.



9: Length compensation by relocation of plastic case. Fix with a short screw.



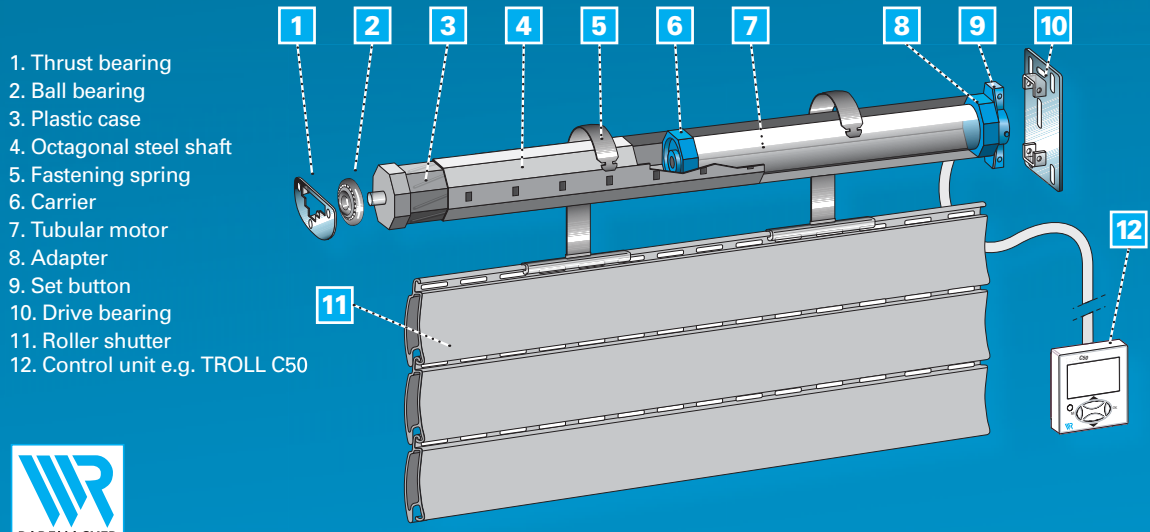
10: Attach fastening springs to steel shaft



11: After setting of end positions with set button, set cable, TROLL C50 or FERNOTRON the roller shutter box can be closed.



12: Allocation of programming centre to the receiver and storage of circuit times.



- 1. Thrust bearing
- 2. Ball bearing
- 3. Plastic case
- 4. Octagonal steel shaft
- 5. Fastening spring
- 6. Carrier
- 7. Tubular motor
- 8. Adapter
- 9. Set button
- 10. Drive bearing
- 11. Roller shutter
- 12. Control unit e.g. TROLL C50



For more convenience and security!

Electronic tubular motors + control systems

Tubular motors series 3000, Outer diameter 35 mm

3011-SW40/60**	10 Nm	12 U/min	115 W	pulling force 25 kg
3013-SW40/60	10 Nm	12 U/min	115 W	pulling force 25 kg
3001-SW40/60**	15 Nm	8 U/min	115 W	pulling force 38 kg
3003-SW40/60	15 Nm	8 U/min	115 W	pulling force 38 kg

RADIO tubular motors series 3000, Outer diameter 35 mm

F-3011-SW40/60**	10 Nm	12 U/min	115 W	pulling force 25 kg
F-3013-SW40/60	10 Nm	12 U/min	115 W	pulling force 25 kg

Tubular motors series 4000, Outer diameter 45 mm

4101-SW60**	25 Nm	12 U/min	200 W	pulling force 55 kg
4103-SW60	25 Nm	12 U/min	200 W	pulling force 55 kg
4001-SW60**	35 Nm	12 U/min	220 W	pulling force 75 kg
4003-SW60	35 Nm	12 U/min	220 W	pulling force 75 kg

RADIO tubular motors series 4000, Outer diameter 45 mm

F-4101-SW60**	25 Nm	12 U/min	200 W	pulling force 55 kg
F-4103-SW60	25 Nm	12 U/min	200 W	pulling force 55 kg
F-4001-SW60**	35 Nm	12 U/min	220 W	pulling force 75 kg
F-4003-SW60	35 Nm	12 U/min	220 W	pulling force 75 kg

Tubular motors series 5000, Outer diameter 55 mm

5001-SW70**	50 Nm	12 U/min	240 W	pulling force 105 kg
5003-SW70	50 Nm	12 U/min	240 W	pulling force 105 kg

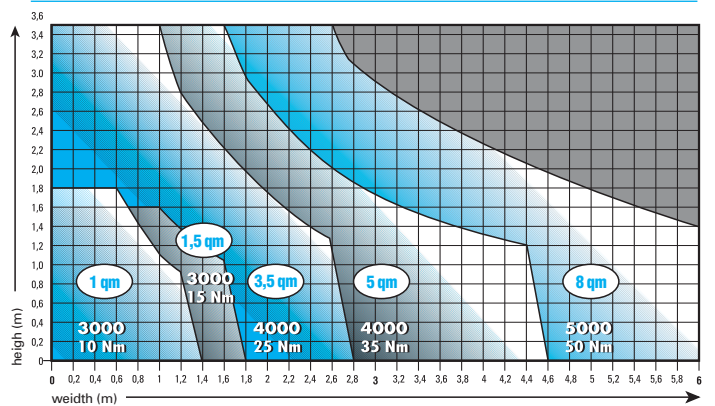
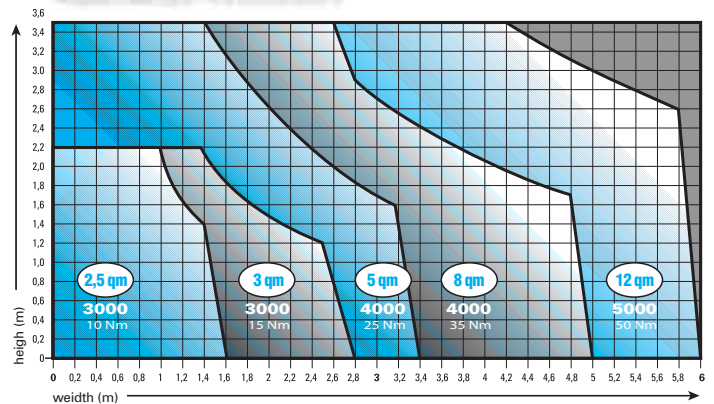
RADIO tubular motors series 5000, Outer diameter 55 mm

F-5001-SW70**	50 Nm	12 U/min	240 W	pulling force 105 kg
F-5003-SW70	50 Nm	12 U/min	240 W	pulling force 105 kg

Tubular motors for awnings

4203-M78	35 Nm	12 U/min	220 W	pulling force 75 kg
5203-M78	55 Nm	12 U/min	240 W	pulling force 105 kg

How to select the right tubular motor:



For more convenience and security!



**Tubular motors with obstacle detection

RADEMACHER – Convenience and Security! Made in Germany.



Headquarters in Rhede



Premises in Rhede



Premises in Dresden



For more convenience and security!

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