

OPERATORS 413 / 415

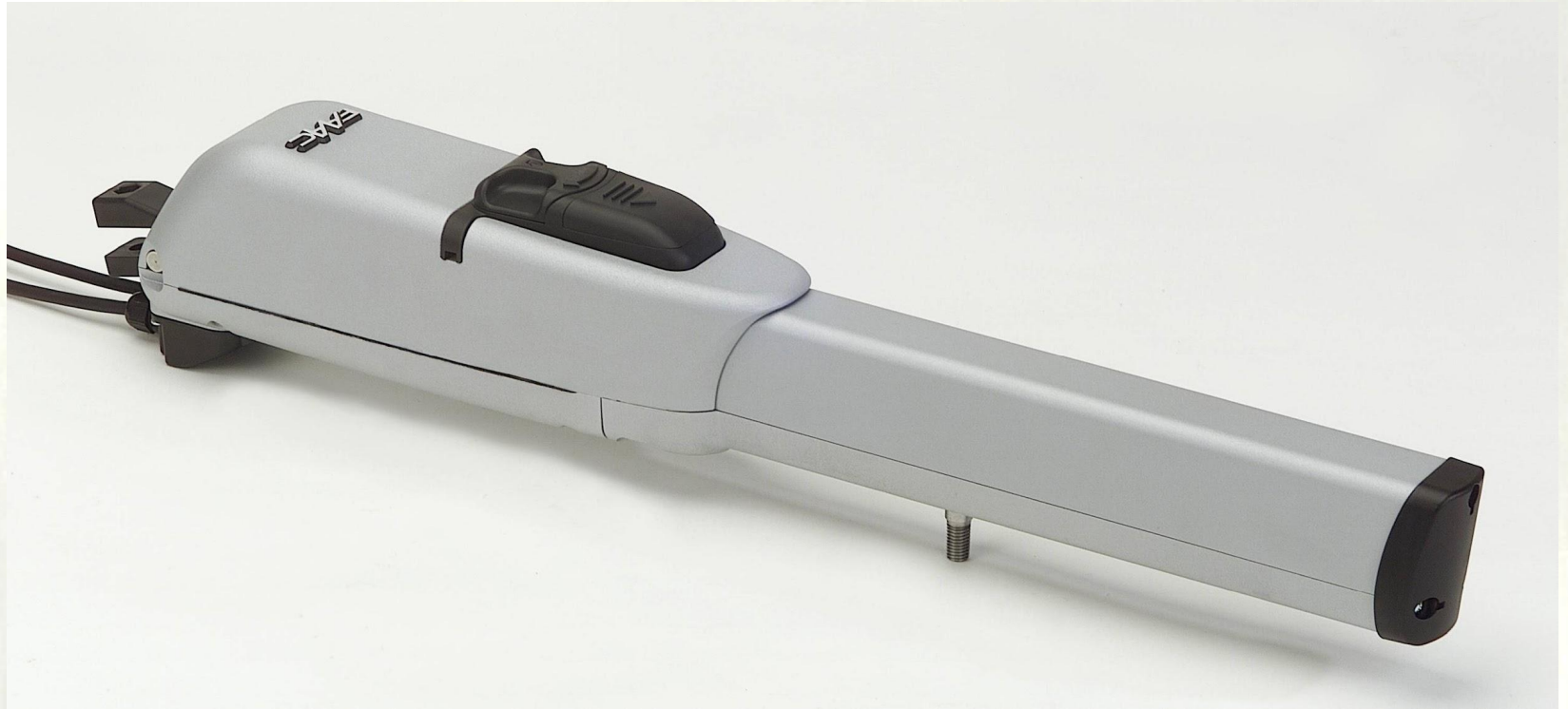
Electromechanical operators for
swing gates



FAAC



OPERATOR 413



FAAC

FAAC



TECHNICAL SPECIFICATIONS

- Operator with “OFF-AXIS” thrust
- Available in versions 230V and 24V
- Available in versions with limit switch
- Built-in mechanical stop for opening and closing
- Coupling of the half-bodies by gasket
- Aluminium body completely double coated guaranteeing a higher resistance to atmospheric agents
- Worm screw in stainless steel
- Bronze transmission crown gear



OPERATOR 413

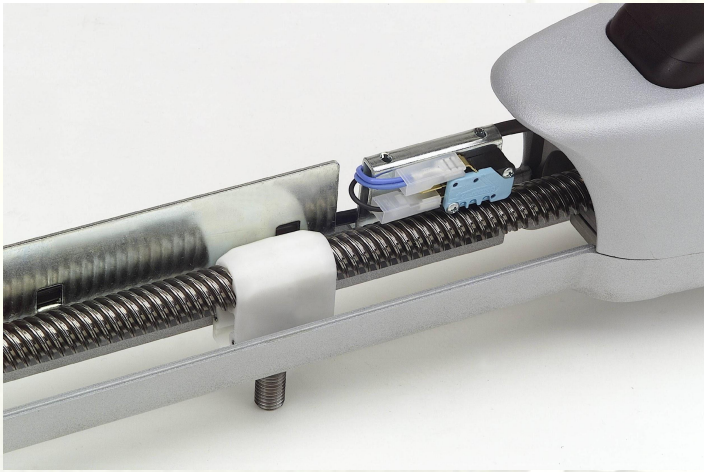


- Release device
–key protected and
easy to operate
- Numbered locks
1-36 (optional)

FAAC



OPERATOR 413



- Limit switch 24 Vdc power supplied to guarantee the highest security
- Possibility for management of “stops” and “slow down”
- Easy adjustment of the limit switches through access from the top

OPERATOR 413



- Horizontal cable exit for installations close to the ground
- Predisposition for the use of the “Gatecoder” deceleration kit

FAAC

RANGE 413

	413	413 LS	413-24V	413 LS-24V
Power supply	230 Vac		24 Vdc	
Power	250 W		70 W	
Current	1,1 A		3 A	
Thermal Protection	140° C		-	
Capacitor	6,3 µF		-	
Thrust	200 daN		250 daN	
Rod stroke	300 mm (350mm without mechanical stops)			
Rod speed	1,6 cm/sec			
Leaf max.*	2,5 m			
Type and use frequency at 20° C	S3 - 30%	S3 - 35%	100%	
Approximate min. cycle/hour at 20° C	~ 25		~ 75	
Operating ambient temperature	-20° C ÷ +55° C			
Operator weight	6,5 Kg			
Operator dimensions	785 x 100 x 155 mm (L x W x H)			
Protection class	IP 44			

*leaf length more than 1,8m : electric lock necessary



OPERATOR 415



FAAC

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TECHNICAL SPECIFICATIONS

- Operator with “IN-AXIS” thrust
- Available in versions 230V and 24V
- Available in versions with rod stroke 300 mm (3m) and 400mm (4m)
- Available in versions with limit switch
- Coupling of the half-bodies by gasket
- Aluminium body completely double coated guaranteeing a higher resistance to atmospheric agents
- Available in versions with limit switch
- Rod in stainless steel



OPERATOR 415

- Horizontal cable exit for installations close to the ground
- Predisposition for the use of the “Gatecoder” deceleration kit



FAAC

OPERATOR 415 (with carter optional)



FAAC



OPERATOR 415



- Release device
–key protected
and easy to
operate
- Numbered locks
1-36 (optional)

FAAC

OPERATOR 415 (LS models)



- Limit switch 24 Vdc power supplied to guarantee the highest security
- Possibility for management of “stops” and “slow down”
- High precision micrometric limit switches, frontal adjustment

OPERATOR 415



- Horizontal cable exit for installations close to the ground
- Predisposition for the use of the “Gatecoder” deceleration kit

• RANGE 415

	415	415LS	415L	415LLS	415-24V	415 LS-24V	415L 24V	415LLS 24V
Power supply	230 Vac				24 V			
Power supply	300 W				70 W			
Current	1,3 A				3 A			
Thermal protection	140° C				-			
Capacitor	8 µF							
Thrust	300 daN				280 daN			
Rod stroke	300 mm		400 mm		300 mm		400 mm	
Rod speed	1,6 cm/sec							
Leaf max.	3 m		4 m *		3 m		4 m *	
Type and use frequency at 20° C	S3 - 30%	S3 - 35%	S3 - 30%	S3 - 35%	100%			
Approximate min. cycle/hour at 20° C	~ 30		~ 25		~ 100		~ 75	
Operating ambient temperature	-20° C ÷ +55° C							
Operator weight	7,8 Kg		8 Kg		7,8 Kg		8 Kg	
Operator Length	840		935		840		935	
Operator dimensions	100 x 125 mm				100 x 123 mm			
Protection class	IP 44							

*leaf length more than 3m : electric lock necessary



FAAC vs



TECHNICAL REPORT
SWING GATE OPERATOR ANALYSIS

AMI A180
ATI A3000

FAAC

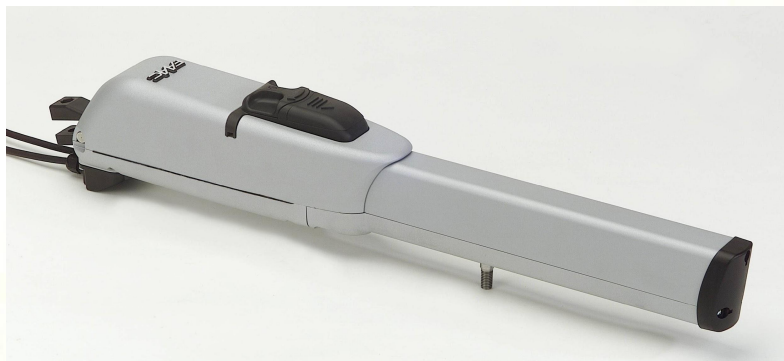


FAAC VS



CONFIDENTIAL
for internal use
only

413



Max leaf length	1,8 m (2,5m)
Max thrust force	200 daN
Frequency of use	S3/30% (35% mod. LS)
Protection class	IP 44 (for external use)
Price list 2005	xxx €

AMI A180



Max leaf length	1,8 m
Max thrust force	200 daN
Frequency of use	30% (1)
Protection class	IP54 (1)
Price list 2005	xxx €

1) See the test results





AMI A180



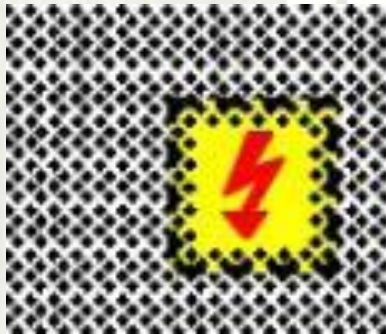
PROTECTION CLASS IP

Model	AMI A 180	
SPECIFICATIONS	Declared	Real
PROTECTION CLASS	IP54	IP42

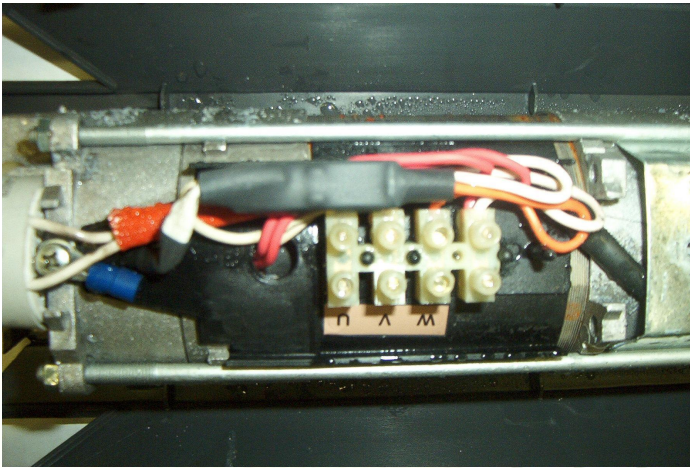
IP 5.. Protection from dust:

Intrusion of dust is not completely excluded but the quantity intruded does not disturb the correct functioning of the material.

IP.. 4 Protection from water jets:
The water sprayed on the housing from all directions should not cause damages.

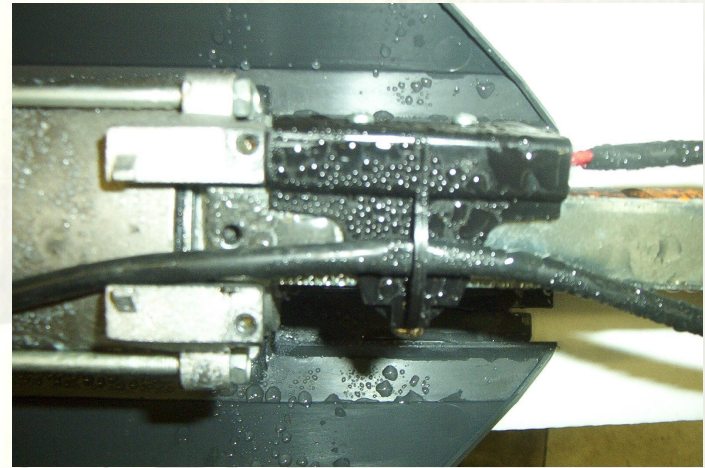


PROTECTION IP

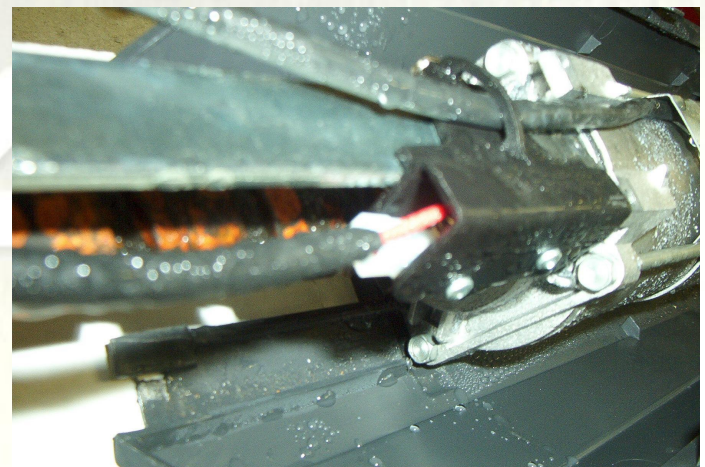
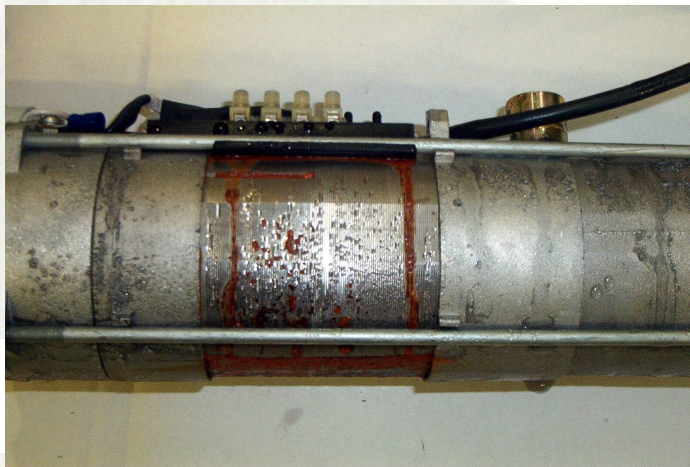


**Connection
terminal board**

Stator

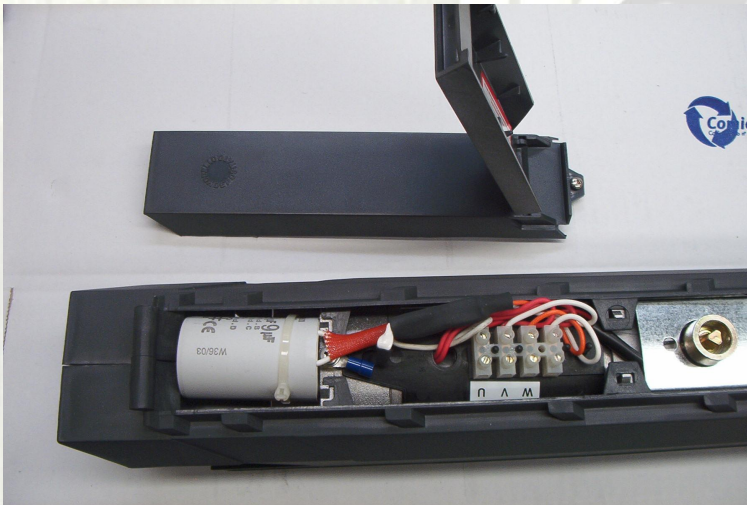
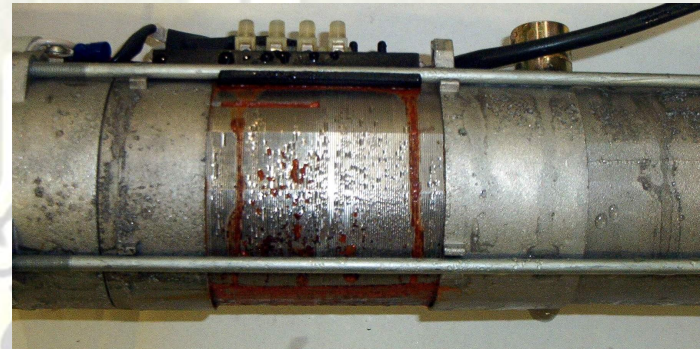


**Limit switch
power supply
230V**



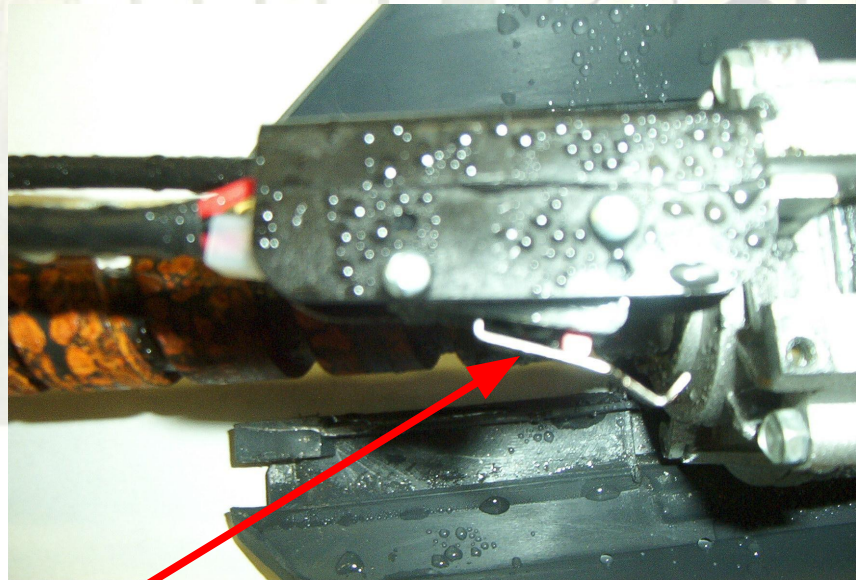
PROTECTION IP : COVER CARTER

- n Very few protection of the reduction gearing due to type of cover and lack of joints



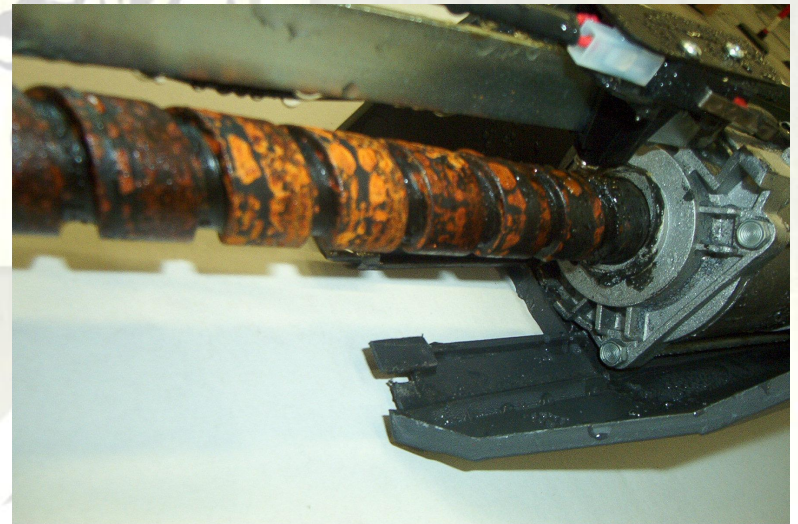
ELECTRIC LIMIT SWITCH

- n Electric limit switch only in opening, INTERFERES IN THE MOTOR PHASE, PROTECTION CLASS IP20. In the instructions no indications are mentioned, no instructions about the use or adjustment range



WORM SCREW

- n The worm screw is made of “normal” steel and protected only by a burnishing treatment (normally used only for internal components).



“LIFE” TEST AMI A 180

- n Functioning test executed on gate LP001 2m leaf weight kg. 360
- n Start test 23-09-04
- n End of test 25-10-'04 after 26.510 cycles
- n Operator out of order for breaking of front part, the breaking concerns not the bracket but the reduction gearing, therefore the entire operator has to be changed.



FAAC VS



415



Max leaf length	2,5 m (3m) 3m (4m) – mod.L
Max thrust force	300 daN
Frequency of use	S3/30% (35% mod. LS)
Protection class	IP 44 (for external use)
Price list 2005	xxx €

ATI A3000



Max leaf length	3 m
Max thrust force	300 daN
Frequency of use	30% (1)
Protection class	IP54 (1)
Price list 2005	xxx €

1) See the test results



AMI A3000

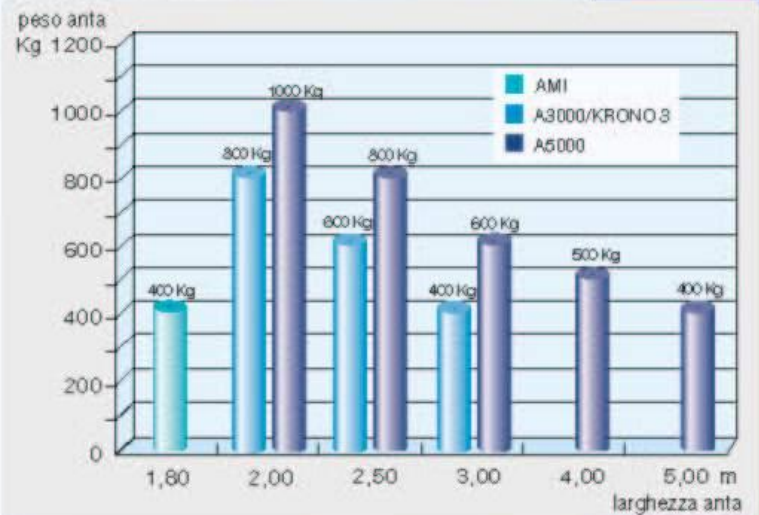
AMI A5000



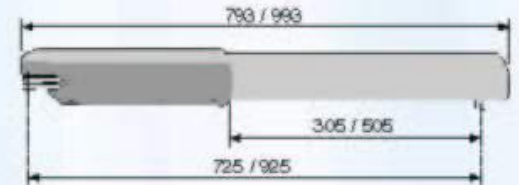
ANALYSIS TECHNICAL SPECIFICATIONS

Model	ATI		
SPECIFICATIONS	Declared	Effective	Remarks
Protection class	IP54	IP 43	IP tests executed
Use frequency	50%	37%	Do not reach the use frequency
Max. Thrust. (N)	3000	3000	OK

Limiti d'impiego

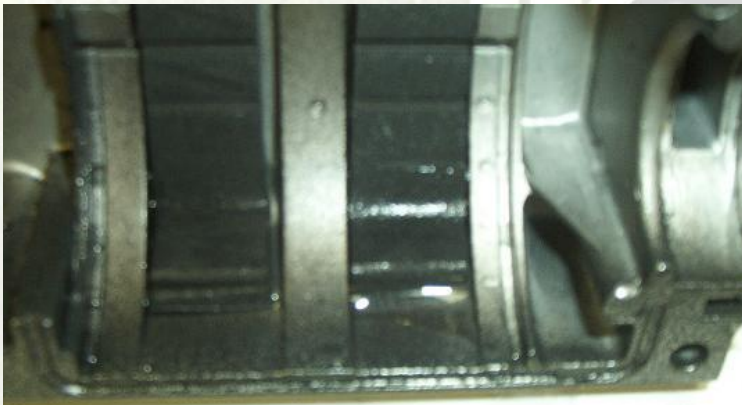
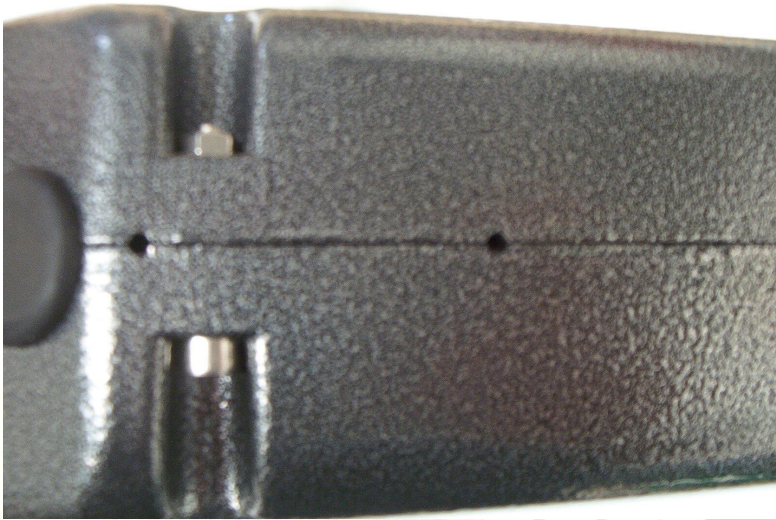


ATI
3/5 m



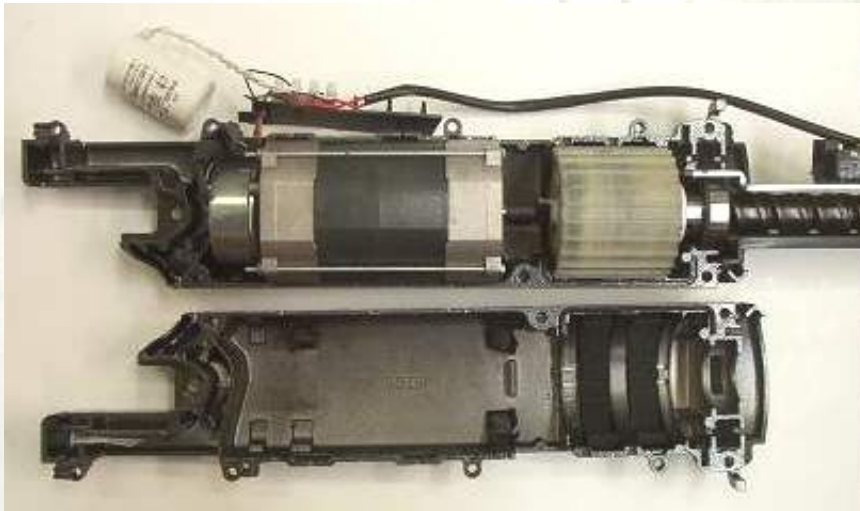
NB.: no models available with mechanical stops

PROTECTION IP

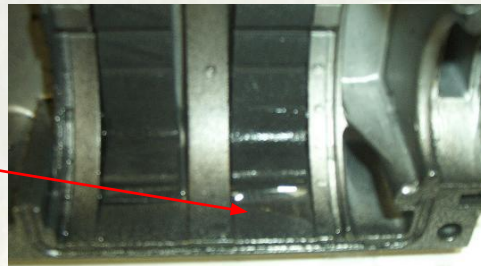


IP PROTECTION CLASS

- n Concept and matching of the carter imply low protection of the complete reduction group.



H2O



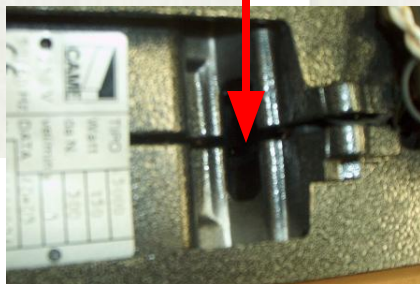
AC

MOTOR CABLE CONNECTION AND ITS RESISTANCE TO WRENCH

The normative requires expressly that “the apparatus needs to be provided with fixing devices for the cable so that the wire is protected from traction and torsion forces...” which certainly is not happening with the ATI product. In this case the cable is passing with a certain number of curves inside in order to guarantee traction resistance, which IS NOT IN ACCORDANCE WITH THE NORMATIVE. Further in the CAME instructions no indications are given for the cable connection, there is just a schema for connection to the terminal board.



Cable
entrance

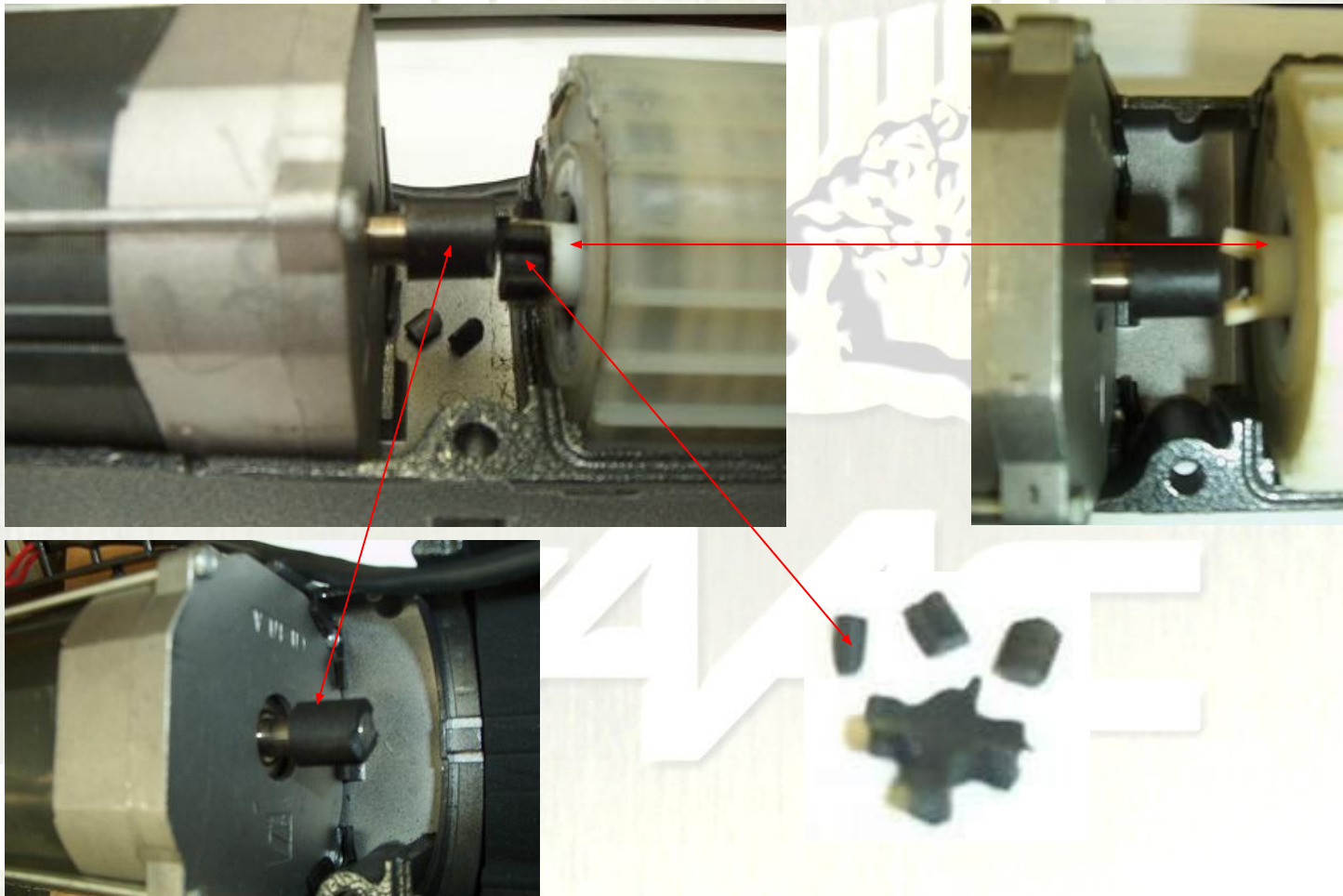


Cable
exit



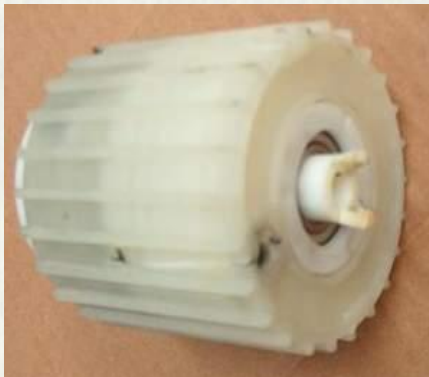
MOTION TRANSMISSION BETWEEN ROTOR AND EPICYCLOIDAL REDUCTION

n Motion transmission between rotor and epicycloidal reduction through plastic junction with non matching dimensions



EPICYCLOIDAL REDUCTION

- n Epicycloidal reduction, locking system through electro brake. The electrobrake keeps the rotor stopped by friction, therefore all the thrusts on the gate are supported by the epicycloidal reduction gearing.



RELEASE SYSTEM

- n The motor lock is given by the electric brake acting on the rotor, while the release through key acts on the outer crown.

Rotating the key the outer crown gets free of the epicycloidal reduction and allows the movement of the leaf.

AGAINST

- n A problem due to this solution is given by the fact that, when you use the max. thrust, that key rotation could be extremely tough.
- n The gearing are subject to external loads and thus need to be dimensioned in appropriate way

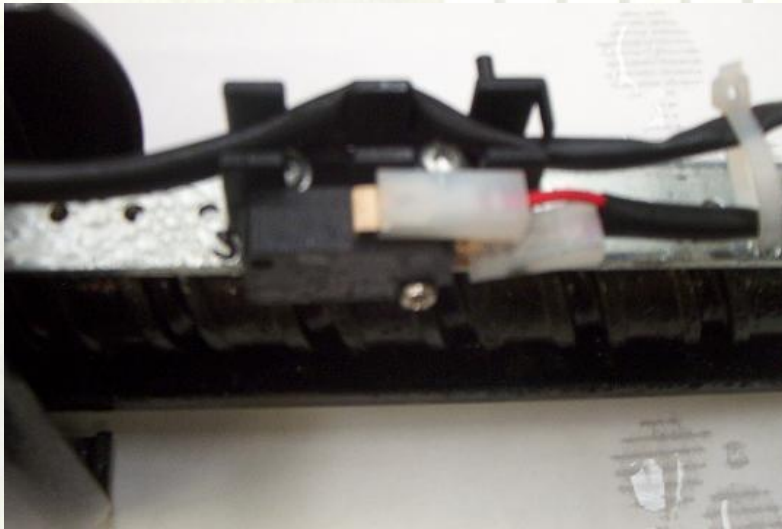
FOR

- n An advantage of this solution is given by the fact that you can, through freeing the electro brake, action the release by a bouden cable (external release box)
- NB.** On the CAME price list is mentioned as accessory a release box to release the system with a cable, but this is not indicated in the instructions.



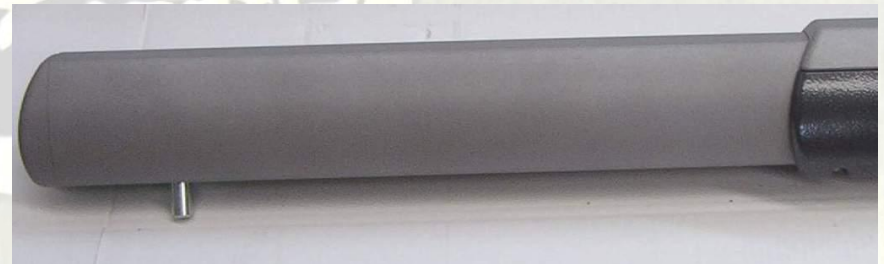
ELECTRIC LIMIT SWITCH

n Electric limit switch in version 230V **INTERFERES ON THE MOTOR PHASE, PROTECTION CLASS IP20.**



REGULATION OF THE ELECTRIC END TRAVELS

- n In order to regulate the electric limit switches, it is necessary to take away the release cover protection before taking off the front cover.



WORM SCREW

- n The worm screw is made of “normal” steel and protected only by a burnishing treatment (normally used only for internal components).



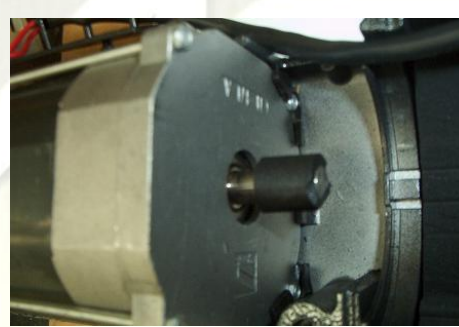
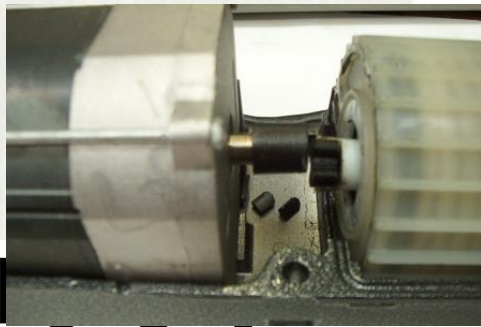
SCREW COVERING

- n The screw covering solution, although it does not guarantee an efficient protection against screw oxidation, can be appreciated because it allows to cover the screw.
- n Further in case of CAME, where the screw oxidizes very quickly, this allows to hide to the user the problems with the screw.



“LIFE” TEST ATI 5000

- n Execution test of functioning on gate LP011 with 4m leaf and weight kg. 250**
- n Start 1° test: 17-12-'04**
 - End test 22 – 12 - '04 after 2.217 cycles due to breaking of coupling**
- n Start 2° test: 04-03-'05**
 - End test 07 – 03 - '05 after 1.350 cycles due to breaking of coupling**



FAAC vs



TECHNICAL REPORT
SWING GATE OPERATOR ANALYSIS

PLUTO PL4005

MOBY 4006

WINGOKIT

FAAC



MOBY



FAAC



FAAC VS



415



Max leaf length	2,5 m (3m) 3m (4m) – mod.L
Max thrust force	300 daN
Frequency of use	S3/30% (35% mod. LS)
Protection class	IP 44 (for external use)
Price list 2005	xxx €

MOBY MB4005



Max leaf length	3 m
Max thrust force	200 daN
Frequency of use	30%
Protection class	IP54 (1)
Price list 2005	xxx €

1) See the test results

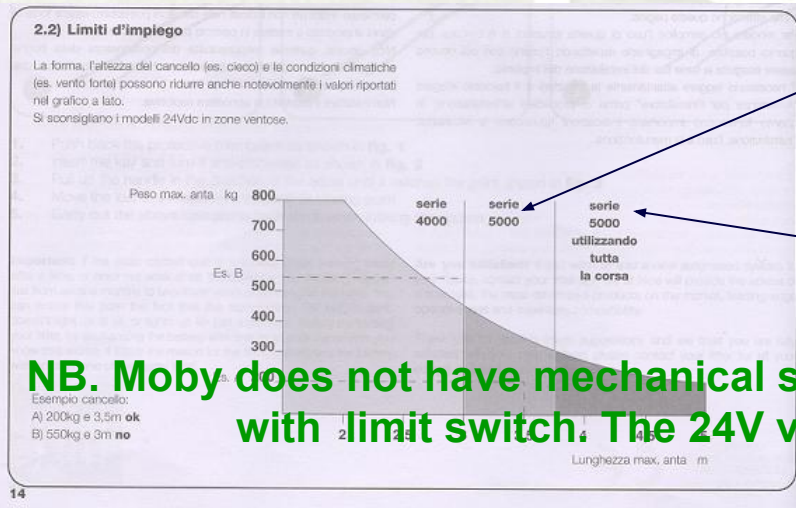


ANALYSIS “MOBY” OPERATOR

Model			
SPECIFICATIONS	Declared	Effective	Remarks
Protection class	IP43	IP42	Protection class not respected
Duty cycles	30%	23%	Use frequency do not correspond (11 Consecutive Cycles)
Max. Thrust. (N)	2000	2000	OK

For leafs larger than m. 3 the necessary use of electric lock is mentioned

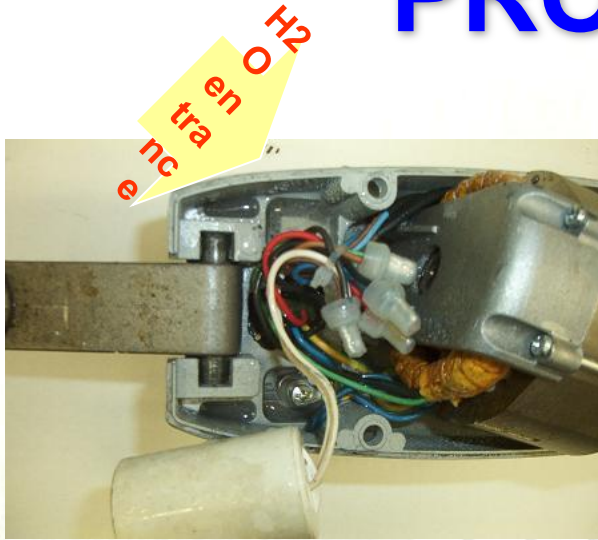
IMPORTANT The models of the 5000serie are indicated for leafs till m. 5, but later, on the graphics indicating the use restrictions, is mentioned “using the whole stroke”. There comes out that for leaf length superior to m 3,75, it is not possible to use limit switches in opening or closing.



- Max. leaf for serie 5000 with max. length m 3,75
- For leaf max.m. 5: in order to reach the leaf length you have to use the whole stroke

NB. Moby does not have mechanical stops in opening/closing; only available in version with limit switch. The 24V version has mech. stop only in opening.

PROTECTION IP



AVAILABLE ONLY IN VERSION WITH ELECTRIC LIMIT SWITCH

“ no mechanical stops ”

- n The Moby model range exists only in version with electric limit switches, BY INTERRUPTING THE PHASE, the version with mechanical stop has not been contemplated
- n Only the 24 V version has the mechanical stop IN OPENING, but without electric limit switch and the encoder has been introduced in the basic model.



THE EXCLUSIVE *Nice* RELEASE EASY TO USE

n The “exclusive” Nice release is certainly easy to operate, but unfortunately it remains in up position when activated and considering the “exclusive” water seal system, this is not an optimal solution. Otherwise you need to deactivate the release to permit any movement



Lo sblocco Nice, di funzionamento semplice e intuitivo

Position of the release device when activated



PLUTO



WINGO

M
O
B
Y



WORM SCREW IN NORMAL STEEL

- Worm screw in normal steel and grease as only protection (Contrary to the FAAC screws which are in STAINLESS STEEL)



PLUTO

WINGO

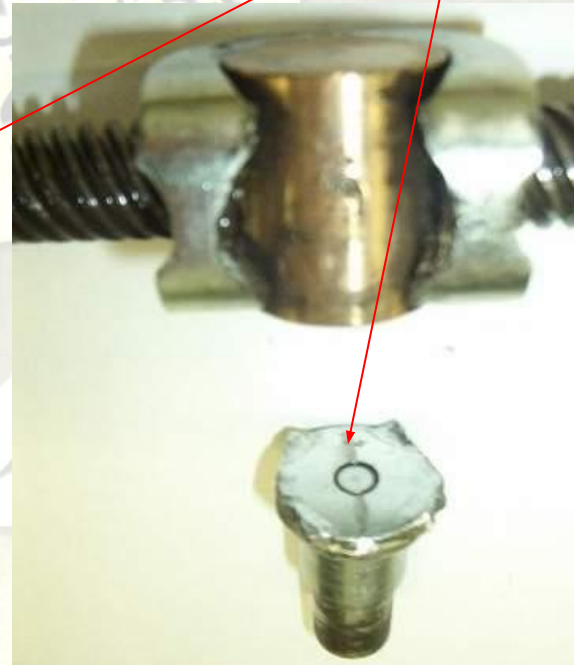
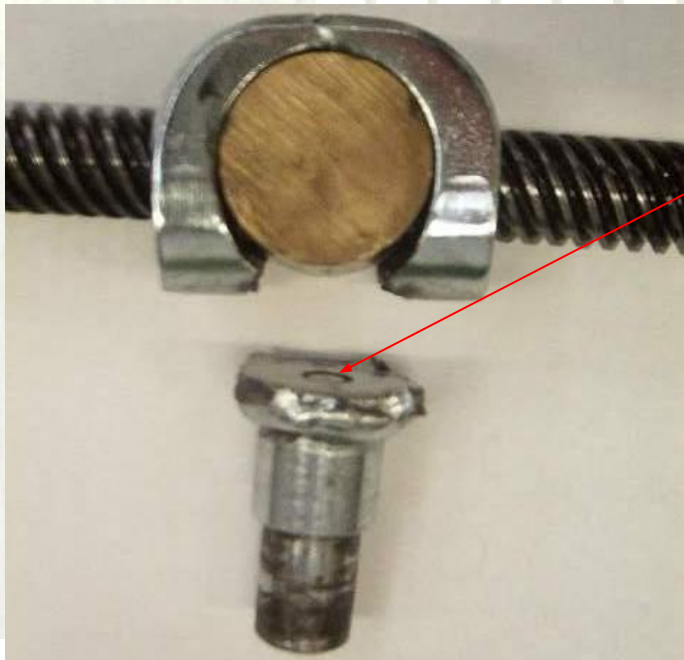


MOBY



LIFE TEST MOBY MB 4006

- n Execution of functioning test on gate LP011 with leaf m 2,50 and weight kg. 200
- n Start test 05-12-'03
- n End of test 02-02-'04 after 26.425 cycles due to breaking of fixing of female screw



PROTECTION OF THE INTERNAL MECHANICS



WORM SCREW IN NORMAL STEEL

n The worm screw is in normal steel and the protection is guaranteed only by the grease used for initial greasing (please notice that the screws used by Faac are in STAINLESS STEEL)



n Oxidation starts very quickly

RELEASE DEVICE

- n The “exclusive” Nice release is certainly easy to operate, but unfortunately it remains in up position when activated, and considering the opening on the body, this is not an optimal solution. Otherwise you need to deactivate the release to permit any movement

Position of the release device when activated



WINGO



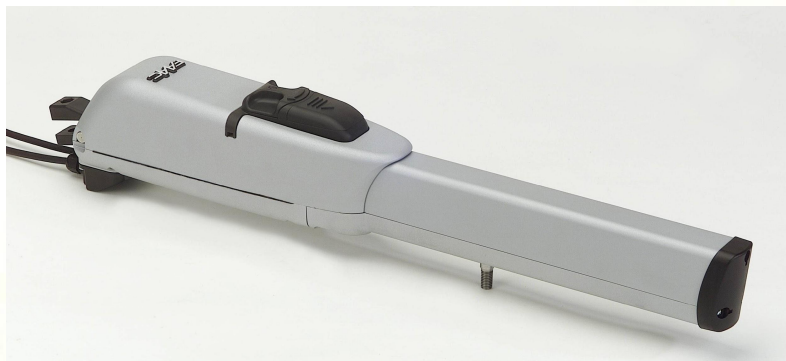
FAAC



FAAC VS



413



CONFIDENTIAL
for internal use
only

Max leaf length	1,8 m (2,5m)
Max thrust force	200 daN
Frequency of use	S3/30% (35% mod. LS)
Protection class	IP 44 (for external use)
Price list 2005	xxx €

CAMERA
WINGOKIT



Max leaf length	1,8 m
Max thrust force	150 daN
Frequency of use	30%
Protection class	IP44 (1)
Price list 2005	Only kit

1) See the test results



ANALYSIS “WINGO” OPERATOR

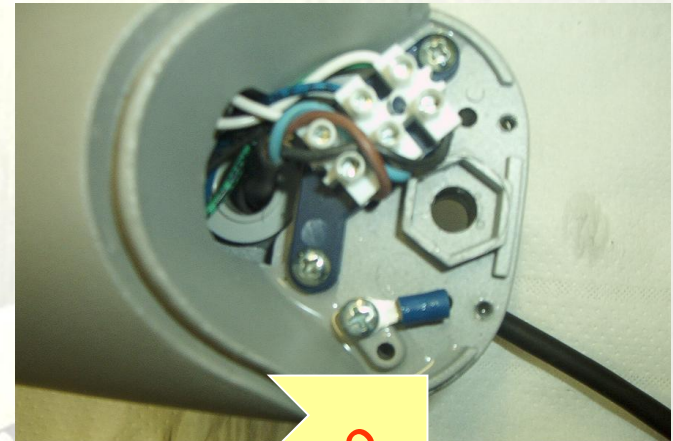
Model	WINGO/H5		
SPECIFICATIONS	Declared	Effective	Remarks
Protection Class	IP43	IP42	Protection class not respected
Duty Cycles	30%	30%	Good Use Frequency – One of the few merits
Max. Thrust (N)	1500	1500	OK
Wingo: only 230V model and available only in kit version			
Max. Leaf length m. 1,80			
Supplied without cable, but only with plug			
Without electric limit switches			
Mechanical stop only in opening, but this is not mentioned (the die-cast body has predisposition for mechanical stops both in opening and closing)			

Remark : Among the use restrictions with leaf weight and leaf length has been indicated that "with panelled gate and in wind conditions, the mentioned values could be reduced considerably

IP 43 PROTECTION

Model	WINGO/H5	
SPECIFICATIONS	Declared	Effective
Protection class	IP43	IP42

n Protection class IP42, please see the water signs in the motor cable area



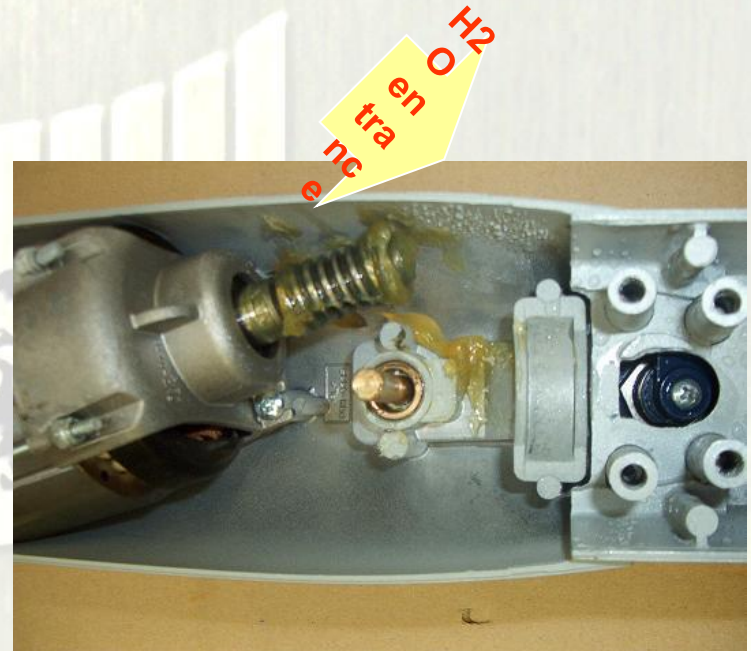
Entrance H2O

REPLACEMENT OF CONDENSER

n To replace the inner condenser it is necessary to open the motor reducer



PROTECTION IP



WORM SCREW IN NORMAL STEEL

- n The worm screw is in normal steel and the protection is guaranteed only by the grease used for initial greasing (please notice that the screws used by FAAC are in STAINLESS STEEL)

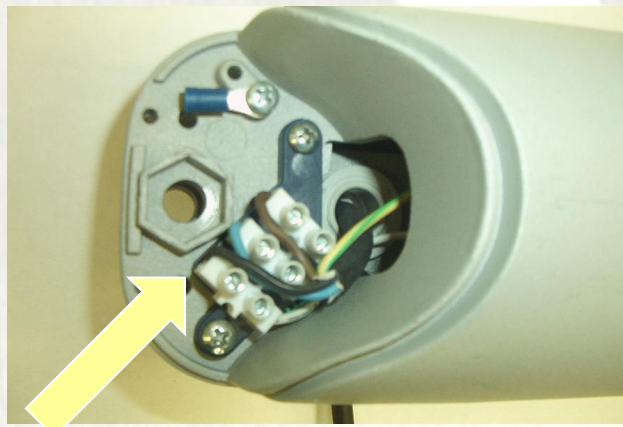


ELECTRIC CONNECTION OF THE OPERATOR

n The cable connection is situated in the area of the fixation pin on the bracket without any separation between terminal board and pin.

NB. In the Nice presentation this issue is mentioned as merit. See “the area for connexions, easy accessible form top” emphasizing “The protected position of the power cable”

The cable sleeve only guarantees a water protection ; in the meantime water enters in the upper part protected by a small cover without any joint



RELEASE DEVICE

- n The “exclusive” Nice release is certainly easy to operate, but unfortunately it remains in up position when activated, and considering the opening on the body, this is not an optimal solution. Otherwise you need to deactivate the release to allow any movement



Lo sblocco Nice, di funzionamento semplice e intuitivo

Position of the release device when activated



RELEASE DEVICE

- n NB. The water you see inside entered with closed release. The plastic carter protection is useless and doesn't prevent water falling directly on screw and bearing
- n It's clear that the customer must re-close the lock each time a manual operation takes place, otherwise the quantity of water inside could be even higher.



Lo sblocco Nice, di funzionamento semplice e intuitivo



LIFE TEST WINGO WG4000

- n Execution of functioning test on gate LP011 leaf m 2,50 weight kg. 200
- n Start test 04-02-'04
- n End of test 09-06-'04 after 45.000 cycles, operator still working

Noise increase and increase of clearance of female screw. Among the 3 Nice models, this is the most performing one.

