

Gearbox for V6001 valves

Operating Instruction

1 Application

RM series gearboxes are quarter turn gearboxes intended for manually operated ball and butterfly valves.

Resideo is not responsible for any damage caused by incorrect use.

2 Safety Guidelines

- 1) Follow the installation instructions
- 2) Use the appliance
 - according to its intended use
 - in good condition
 - with due regard to safety and risk of danger
- 3) Note that the appliance is exclusively for use in the applications detailed in these installation instructions (see 3 Technical Data). Any other use will not be considered to comply with requirements and would invalidate the warranty
- 4) Please take note that any assembly, commissioning, servicing and adjustment work may only be carried out by authorized persons.
- 5) Immediately rectify any malfunctions which may influence safety

3 Technical Data

	RM.0250	RM.0750	RM.1200
Material			
Shell:	Cast iron EN GJL250, FBE epoxy coated (RAL 5002)		
	bonnet		
	aluminium		
Rack:	Ductile iron EN GJS400-15		
Worm gear:	Carbon steel C45		
O-ring:	NBR		
Handwheel:	Steel sheet metal epoxy coated		
Handwheel stem:	Stainless steel AISI 410		
Bolt and nuts:	Stainless steel AISI 410		
Specifications			
Ambient temperature:	-20...+80 °C		
Stroke:	90° ± 5°		
Mechanical stroke limit:	Opening and closing position, with regulating and locking socket screws		
Protection class:	IP65		
Weight:	2.45	6.9	8.5

Torque (NM)

Output:	250	750	1200
Input:	21	50	48

Connection

Drilling*:	4xM6x10 / 4xM8x16	4xM10x16*	4xM12x21
Bore**:	P 17	P 22	P 27

Standards and norms

ISO 5211:	F05 / F07	F10	F12
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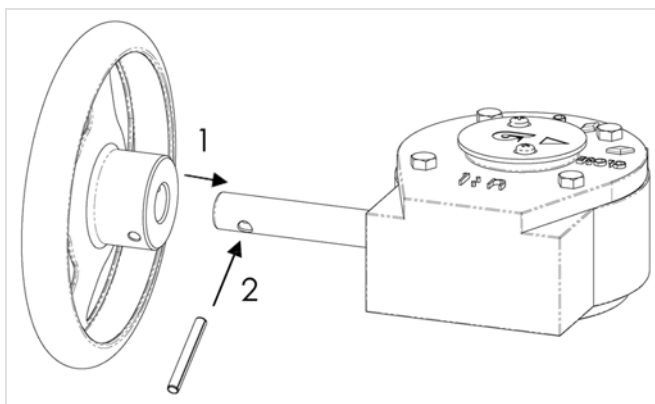
* number of holes x thread x thread depth

** Q = square, P = polygon

4 Assembly

Installation Guidelines

- We recommended to mount the handwheel on the input shaft before assembling the gearbox to the valve.



- Gearbox is standard delivered in closed position. Check the fully closed position by turning the handwheel clockwise.
- Check that bolt circle of the ISO flanges (valve and gearbox) match. Check also that valve stem and gearbox bore match.
- Make sure the valve is in the closed position. If not, close the valve before continuing.
- Mount the gearbox on the valve. Fasten with bolts and spring washers. Use bolts of 8.8 quality or better, thread depth are shown in chapter 1.1. Fasten bolts crosswise to the torque values shown below.

Bolt	M6	M8	M10	M12
Torque (Nm)	9.5	23	46	79

5 End stops adjustment

If an adjustment of the closing / opening position is required, do as follow:

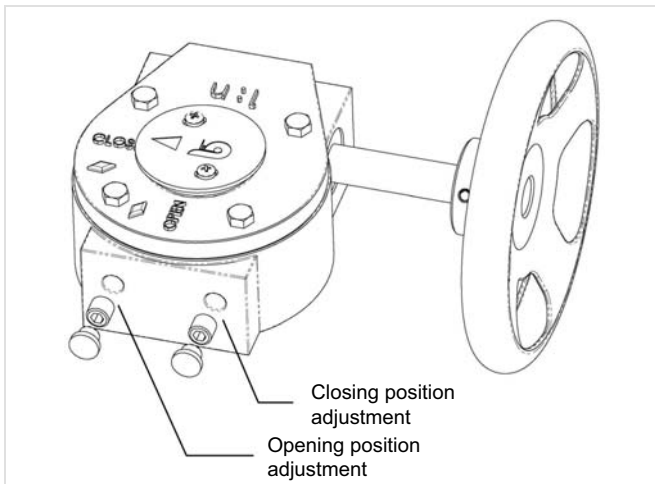


Fig. 1 Remove protection cap and blocking screw

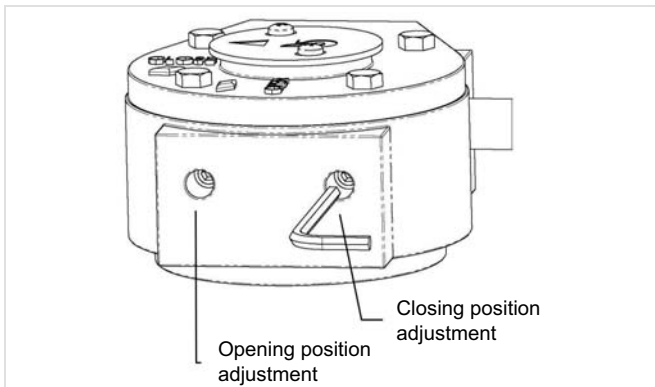


Fig. 2 Adjustment setscrew by the mean of an Allen key

Closing position adjustment

- 1) Turn the handwheel to reach the gearbox closing position.
- 2) If the valve fully closed position can not be achieved, remove protection cap and blocking screw and loosen the adjustment setscrew by the mean of an Allen key. Turn handwheel clockwise to reach valve fully closed position. Screw the adjustment setscrew until blocked.
- 3) If the valve totally closed position is overrun, turn the handwheel counter clockwise to meet the valve fully close position. Screw the adjustment setscrew until blocked.
- 4) Screw the blocking screw until blocked and put the cap back in place.

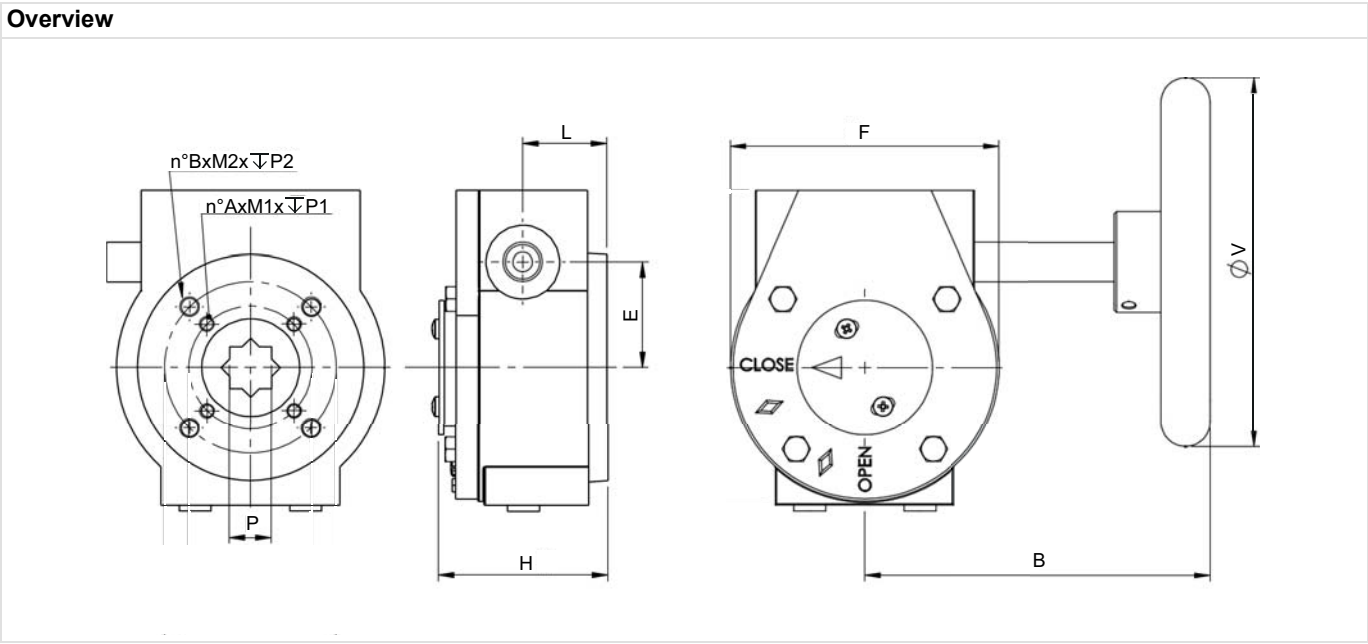
Opening position adjustment

- 5) Turn the handwheel to reach the gearbox opening position.
- 6) If the valve fully opened position can't be achieved, remove protection cap and blocking screw and loosen the adjustment setscrew by the mean of an Allen key. Turn handwheel counter clockwise to reach valve fully open position. Screw the adjustment setscrew until blocked.
- 7) If the valve totally open position is overrun, turn the handwheel clockwise to meet the valve fully open position. Screw the adjustment setscrew until blocked.
- 8) Screw the blocking screw until blocked and put the cap back in place.

6 Maintenance

- Operating direction: turn clockwise to close, turn counter clockwise to open. The valve position is indicated by the arrow on the gearbox position indicator.
- The gearbox is self-braking. No additional fixation are required to retain the valve position.
- We recommend to check the bolt between valve and actuator for tightness six months after commissioning.
- If the gearbox is very seldom operated we recommend to perform a test run every six months.

7 Dimensions



Parameter		RM.0250	RM.0750	RM.1200
Dimensions:	F	101	113	122
	L	30	42	43
	E	46	63	75
	H	56	77	77
	B	150	245	230
	V	140	300	300

Note: All dimensions in mm unless stated otherwise.



Manufactured for
and on behalf of
Pittway Sàrl, Z.A., La Pièce 6,
1180 Rolle, Switzerland

For more information
resideo.com
Ademco 1 GmbH, Hardhofweg 40,
74821 MOSBACH, GERMANY
Phone: +49 6261 810
Fax: +49 6261 81309

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