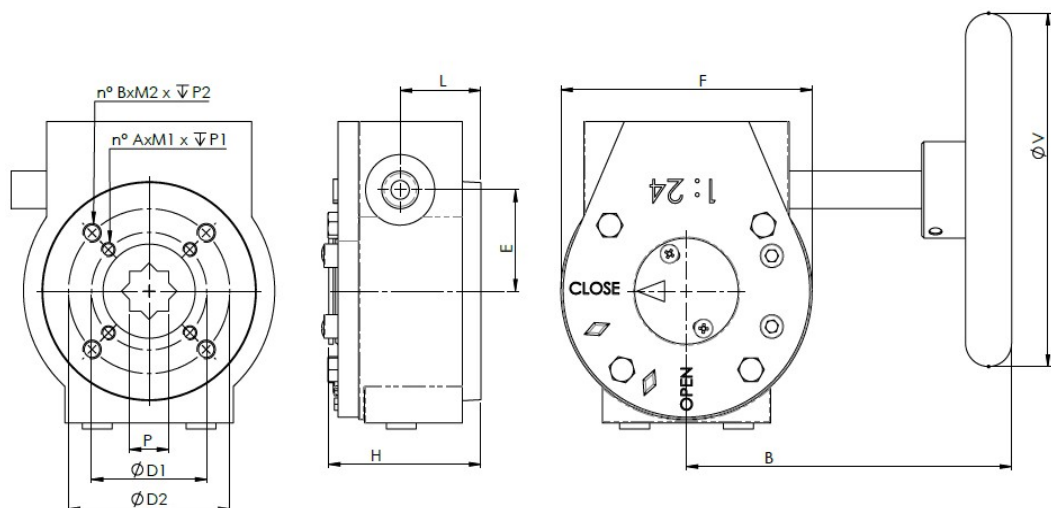


RM series gearboxes are quarter turn gearboxes intended for manually operated ball and butterfly valves.
Brandoni S.p.A. is not responsible for any damage caused by incorrect use.

1 Technical data



Type		RM.0250	RM.0750	RM.1200
Dimensions [mm]	F	101	113	122
	L	30	42	43
	E	46	63	75
	H	56	77	77
	B	150	245	230
	V	140	300	300
Connections [mm]	ISO 5211	F05 + F07	F10	F12
	$n^{\circ} A \times M1 \times \downarrow P1$	4 x M6 x 10	-	-
	$n^{\circ} B \times M2 \times \downarrow P2$	4 x M8 x 16	4 x M10 x 16	4 x M12 x 21
	P	17	22	27
Torque [Nm]	Output	250	750	1200
	Input	21	50	48
	Gear ratio	24:1	30:1	50:1
Weight [kg]		2,45	6,9	8,5

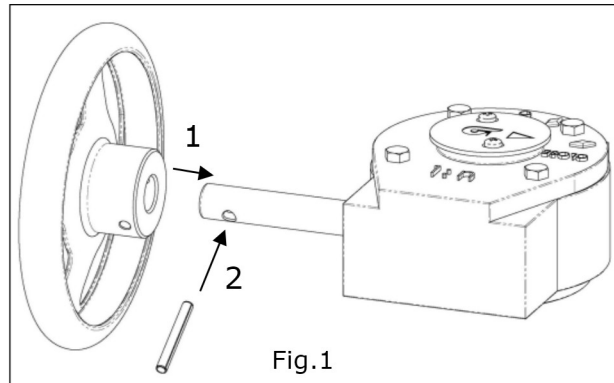
Type	RM.0250	RM.0750	RM.1200
Protection grade	IP 65		
Ambient temperature	-20 ÷ +80°C		
Stroke	90° ± 5°		
Mechanical stroke limit	Opening and closing position, with regulating and locking socket screws.		
Materials	Shell: cast iron EN GJL250 (RM.0250: bonnet aluminium), FBE epoxy coated (RAL 5002) Rack: 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 201		

1.2 Warnings

- Be sure to read and understand this manual before the installation and use of the gearbox.
- Check that the gearbox is correctly sized for the valve to be operated; do not exceed given maximum allowable torques.
- Installation and operating interventions shall be carried out by trained staff, taking account of local safety regulations.
- Store in a dry place and protect against dust.
- Handle with care, avoid hit and floor dampness, use suitable, sturdy packing for transport.

2 Installation

- 1 We recommended to mount the handwheel on the input shaft before assembling the gearbox to the valve (fig. 1).



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

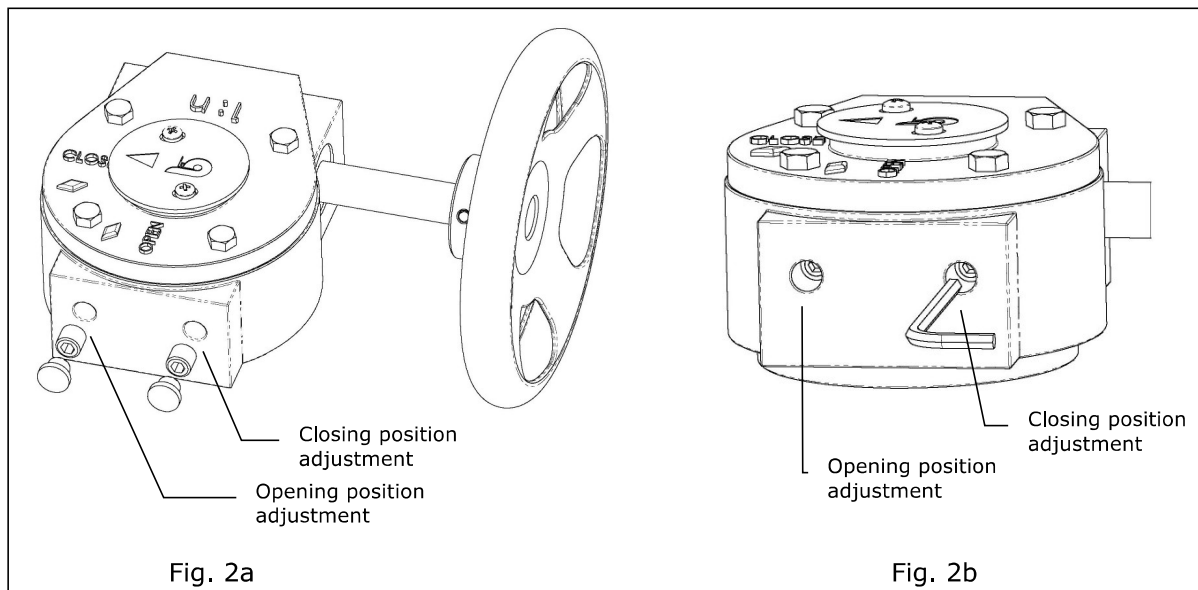
Bolt	M6	M8	M10	M12
Torque Nm	9,5	23	46	79

3 Operating and maintenance

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

4 End stops adjustment.

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



3.1 Closing position adjustment

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

3.2 Opening position adjustment

- 4 Turn the handwheel to reach the gearbox opening position.
- 5.1 If the valve fully opened position can't be achieved, remove protection cap and blocking screw (fig. 2a) and loosen the adjustment setscrew by the mean of an Allen key (fig. 2b). Turn handwheel counterclockwise to reach valve fully open position. Screw the adjustment setscrew until blocked.
- 5.2 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.
- 6 Screw the blocking screw until blocked and put the cap back in place.