



Manufacturer of shut-off and control valves

## TECHNICAL DATA SHEET

**Quarter turn gearbox E HAM RQN<sub>x</sub>-xZ-x**



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## 1. GENERAL PRODUCT INFORMATION

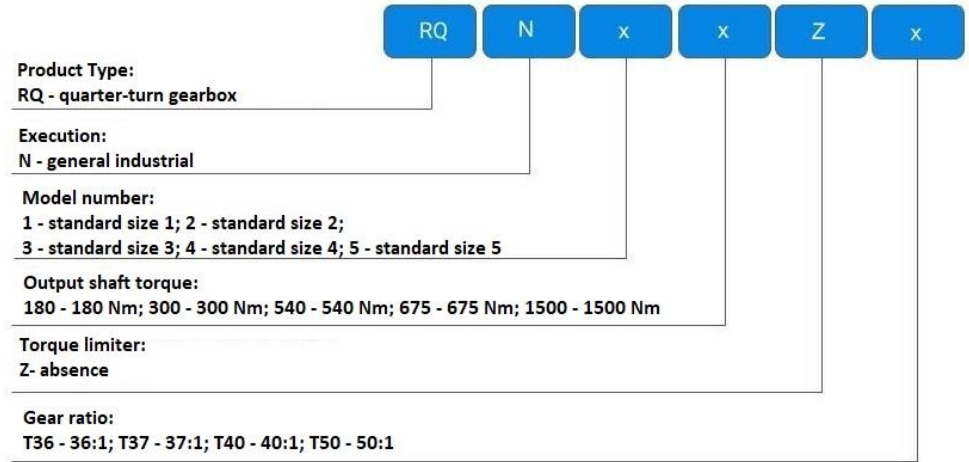
1.1. Product name: Quarter-turn gearbox ELEPHANT HAM RQN<sub>x</sub>-xZ-x.

1.2. Manufacturer (supplier): "ELEPHANT". Carrer d'Aragó,264,3-1,08007 Barcelona, Spain.

1.3. Purpose: The ELEPHANT HAM gearbox allows manual setting of the required positioning of the shut-off valve by a quarter turn, acting as an alternative to pneumatic, electric or hydraulic quarter-turn actuators. It is suitable for ball valves, butterfly valves, 90° butterfly valves and for controlling air dampers.



#### 1.4. Deciphering of the designation:



## 2. BASIC TECHNICAL DATA AND CHARACTERISTICS

Table 1

Ambient temperature, °C	-30 to +120
Enclosure protection class	IP67
Application	for various industries where fluid flow control is required
Mounting	horizontal/vertical
Stroke adjustment	0 - 90° (changeable ±5°)
Connection standard	ISO 5211



### 3. BASIC MATERIALS

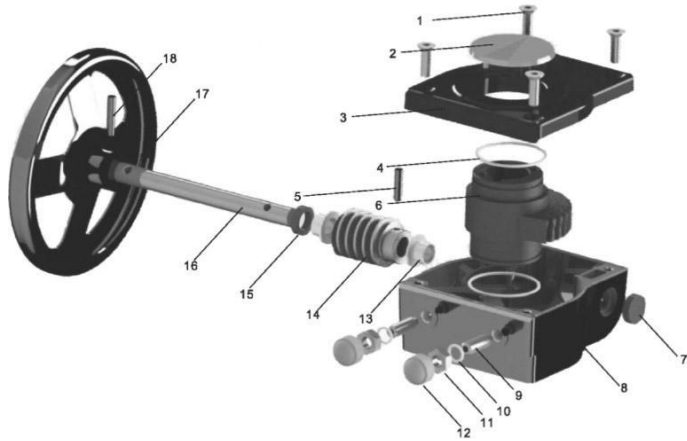


Table 2 specification

Nº	Name	Material
1	Bolt	stainless steel 304
2	Pointer	ABS plastic
3	Cover	aluminum alloy
4	Sealing ring	NBR70
5	Pin	black steel
6	Worm gear	ductile iron
7	Seal	NBR70
8	Housing	aluminum alloy
9	Adjusting bolt	black steel
10	Gasket	stainless steel 304
11	Adjusting nut	stainless steel 304
12	Nut cover	NBR70
13	Bearing	powder steel
14	Worm shaft	steel 45
15	Seal	NBR70
16	Drive shaft	stainless steel 304
17	Handwheel	polyester coated carbon steel
18	Pin	black steel



#### 4. OVERALL AND CONNECTION DIMENSIONS

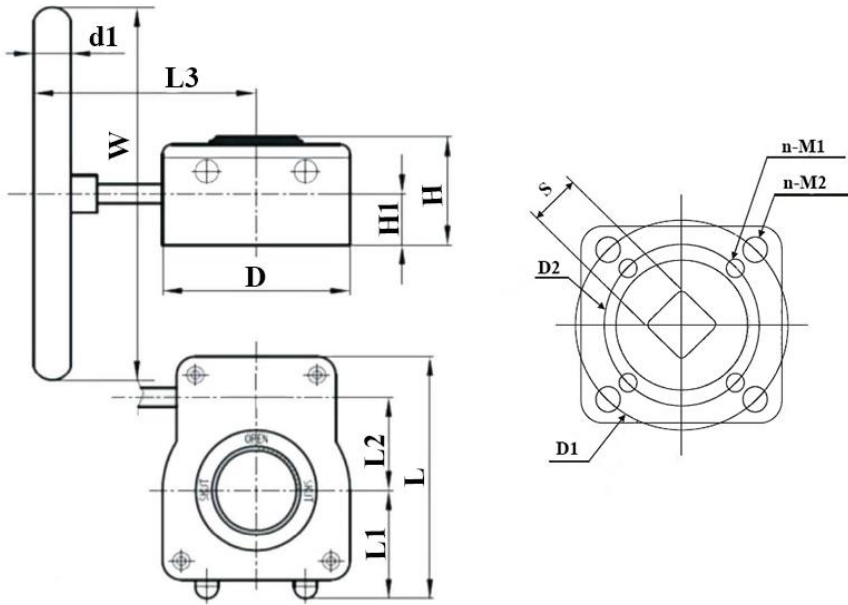


Table 3

Model	HAM	HAM	HAM	HAM	HAM
D, mm	80	100	120	142	175
D1 mm	70	90	102	125	140
D2,mm	50	70	70	102	102
n-M1	4-M6x10	4-M8x12	4-M8x10	4-M8x10	4-M8x10
n-M2	4-M8x12	4-M10x12	4-M10x15	4-M12x18	4-M16x24
S, mm	17x17	17x17	22x22	24x24	27x27
L, mm	115	130	150	180	220
L1, mm	50	58	65	80	95
L2, mm	42	50	60	60	78
H, mm	48	58	58	74	84
H1,mm	19	18	18	21	51
d1, mm	20	20	20	20	25
L3, mm	160	160	215	225	325
W, mm	140	200	250	300	400



## 5. TECHNICAL PARAMETERS

Table 4

Model	HAM RQN1-180Z- T40	HAM RQN2-300Z- T37	HAM RQN3- 540Z- T36	HAM RQN4- 675Z- T36	HAM RQN5- 1500Z- T50
Gear ratio	40:1	37:1	36:1	36:1	50:1
Torque, Nm	180	300	540	675	1500
ISO flange type	F05/F07	F07/F09	F07/F10	F10/F12	F10/F14
Weight, kg	1.2	2.0	2.8	4.8	11



## 6. INSTALLATION AND OPERATING INSTRUCTIONS

6.1. The installation, operation and maintenance of gearboxes are allowed to personnel who have studied the product design, safety rules, requirements of this TA and have skills of working with gearboxes.

6.2 When working with the reducer, piping and fittings must not be under pressure. During installation and maintenance, the electric, pneumatic or hydraulic power supply to the actuators used with the gearbox must be cut off and precautions must be taken to prevent their unintentional activation.

6.3 Before mounting the gearbox to the pipeline valve, set the gearbox and the valve shut-off body in the “open” or “closed” position. Then mount the actuator on the square of the drive shaft and the connecting flange of the valve and fasten with bolts.

6.4 During installation it is forbidden to use wrenches with extended handles and other devices other than those provided for the product, as well as to strike the product.

6.5 Adjustment of the limit stop is carried out immediately after mounting the gearbox to the valve. The adjustment is always checked by manually setting the gearbox in the “closed” and “open” positions.

6.6 The suspension screw on the gearboxes is only used for lifting and necessary operations with the gearbox itself. It is strictly forbidden to lift or carry the valve + gearbox assembly by any gearbox components.

6.7 During manual operation, turn the gearbox mechanism with the hand wheel in the direction in which the valve opens or closes.

6.8 If the gearbox is in the end position CLOSED, but the valve has not shut off the flow, this indicates improper adjustment of the gearbox, or a malfunction of the valve, or some other fault.

6.9 It is forbidden to apply excessive force on the gearbox shaft in an attempt to turn the gearbox additionally and thereby move the shut-off valve to the desired position.

6.10. In order to avoid accidents, the general requirements for installation and operation must be observed during installation and operation in accordance with the company's procedures.



## **7. TRANSPORTATION AND STORAGE CONDITIONS**

7.1. Storage should be carried out in the factory packaging in accordance with the procedure established at the enterprise.

7.2. The transportation of products must be carried out in accordance with the procedure established at the enterprise.

## **8. UTILIZATION**

8.1. The product is disposed of in accordance with the procedure established at the enterprise (remelting, burial, resale).





## 9. WARRANTY OBLIGATIONS

9.1. Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

9.2. The warranty applies to equipment installed and used in accordance with the installation instructions and product specifications described in this data sheet.

9.3. The manufacturer guarantees compliance of the product with safety requirements, provided that the consumer complies with the rules of transport, storage, installation and operation.

9.4. The warranty covers all defects caused by the fault of the manufacturer.

9.5. The warranty does not apply:

- parts and materials of the product subject to wear and tear;
- for cases of damage caused by:
  - modifications to the original design of the product;
  - violation of general installation recommendations;
  - faults caused by improper maintenance and storage; improper operation and use of the equipment.

## 10. WARRANTY TERMS

10.1. Claims to the quality of the goods may be made during the warranty period.

10.2. Defective products are repaired or exchanged for new ones free of charge during the warranty period. ELEPHANT decides whether to replace or repair the product. The replaced product or its parts resulting from the repair shall become the property of 'ELEPHANT'.

10.3. Costs related to dismantling, installation and transport of the defective product during the warranty period shall not be reimbursed to the Buyer.

10.4. If the claim is unfounded, the Buyer shall pay the costs of diagnostics and expertise of the product.

10.5. Products are accepted for warranty repair (as well as for return) fully assembled.



## WARRANTY CARD № \_\_\_\_\_

№	Product Name	Packs

Name and address of the trading organisation \_\_\_\_\_

Date of sale \_\_\_\_\_ Seller's signature \_\_\_\_\_

Stamp or seal of the trading organisation \_\_\_\_\_ Acceptance stamp \_\_\_\_\_

I agree with the terms and conditions of the warranty:

Buyer \_\_\_\_\_ (signature)

Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

For warranty repairs, complaints and product quality claims, please contact ELEPHANT at: Carrer d'Aragó,264,3-1,08007 Barcelona, Spain E-mail address: sales@valveelephant.com.

When making a complaint about the quality of goods, the buyer shall present the following documents:

1. A free-form application, which shall specify:
  - name of the organisation or full name of the buyer, actual address, contact telephone numbers;
  - name and address of the organisation that carried out the installation;
  - basic parameters of the system in which the product was used;
  - a brief description of the defect.
2. Document confirming the purchase of the product (delivery note, receipt)..
3. Act of hydraulic test of the system in which the product was installed.
4. This completed warranty card.

A note on the return or exchange of goods \_\_\_\_\_

Date: « \_\_\_ » \_\_\_\_\_ 202\_\_ r. Caption \_\_\_\_\_

