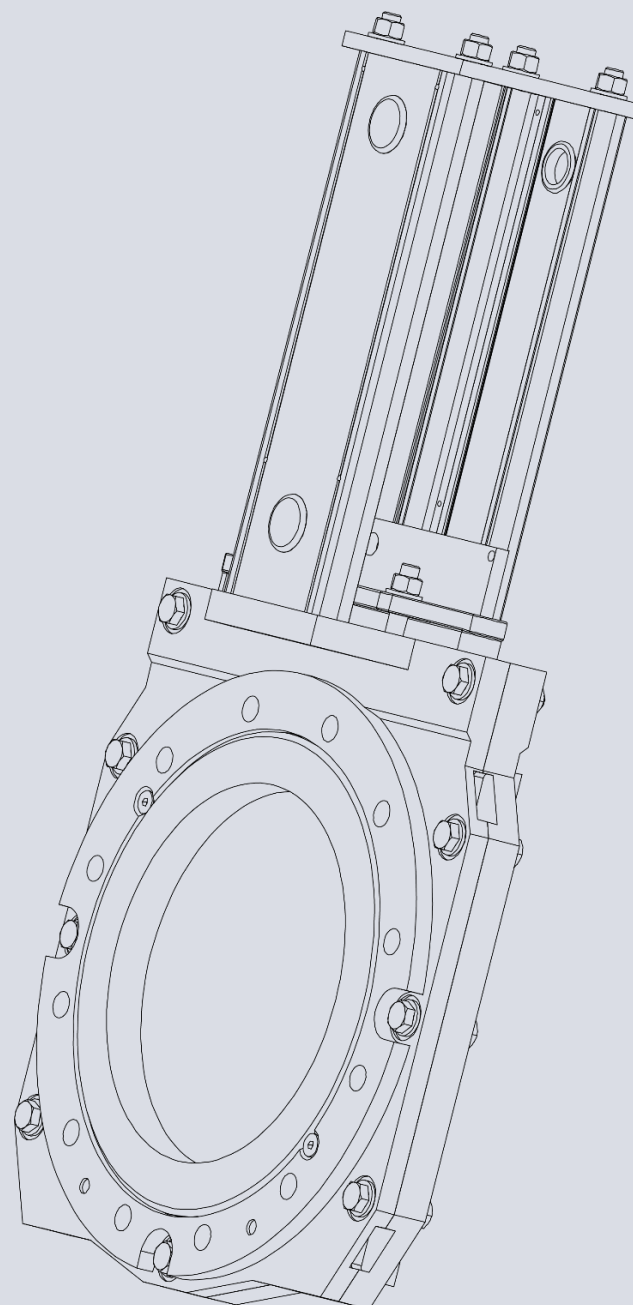


Stafsjö
SINCE 1666

Maintenance instruction

Knife gate valve RKO

DN 100 - DN 600 (4" - 24")



Stafsjö Valves AB

SE-618 95 Stavsjö, Sweden




+46 11 39 31 00 | info@stafsjo.se | www.stafsjo.com

1. Introduction

This maintenance instruction is a step-by-step instruction for maintenance of

A. RKO knife gate valve DN 100 - DN 600 (4" - 24").

In this instruction notes and warnings are marked with symbols:

	Danger / Warning Points out a dangerous situation which may cause personal injuries or death.
	Advice Has to be respected.
	Information Information useful to follow.



If these notes and warnings are not respected by the user, dangerous situations may occur and may invalidate the warranty.

2. Spare parts

Each Stafsjö knife gate valve is identified with a label containing the valve item number and its serial number. When corresponding with Stafsjö or our local sales partner, please have this available to make sure you order and receive correct spare parts.


Stafsjö recommends the customer to keep one set of "basic" spare part kit for each valve type and size on stock. Spare parts can be ordered from Stafsjö or our local sales partners.

3. Disassembling of valve parts

	<ul style="list-style-type: none">• Steps and procedures described in this section are based on a valve which is not installed in a pipe system.• Follow procedure described in installation and service instruction for the knife gate valve and its actuator.• Maintenance shall be performed by qualified personnel. Qualified are those persons who, due to experience, can judge the risk and execute the work correctly and who are able to detect and to eliminate possible risks.• Always consider the application of the valve and carefully prepare relevant personal safety equipment before starting any maintenance.
	<ul style="list-style-type: none">• Always have the knife gate valve's article and serial number available to ensure you order correct spare parts to your valve.

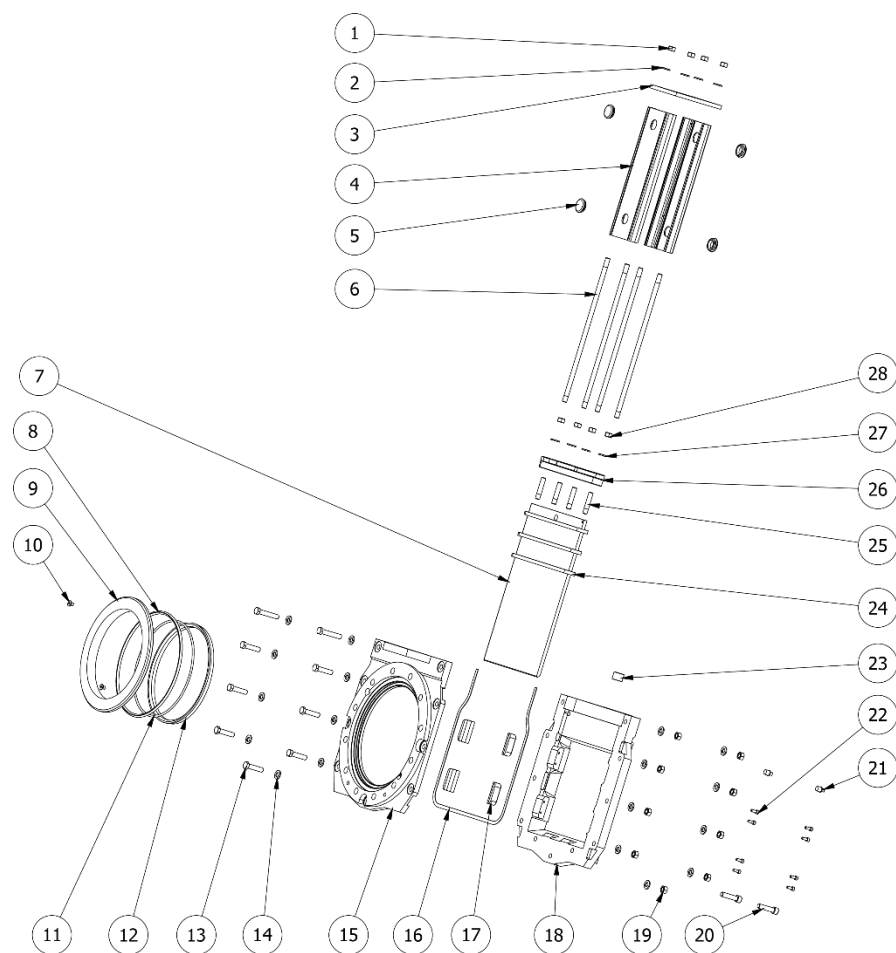
To simplify the disassembling of the knife gate valve, place the valve on a horizontal work bench.

1. Disconnect the air/hydraulic/power supply. Follow procedure described in installation and service instruction for the knife gate valve and its actuator.
2. Disconnect the actuator and topworks.
3. Disconnect the gland.
4. If needed, unscrew valve body bolting and remove one valve body side from the other.
5. Remove stuffing box braids and its scrapers (if any).
6. Remove the gate.
7. Inspect the gate for any damages. Dents and scratches will affect its ability to seal tight.
8. Remove retainer rings and the seat.
9. Remove the body gasket and guiding pads.
10. Clean the inside of knife gate valve carefully, especially all sealing surfaces.

	<ul style="list-style-type: none">• Recycle worn out parts to extent possible.
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A. RKO knife gate valve DN 100 - DN 600 (4" - 24").

Pos	Part	Spares		
1	Nut			
2	Washer			
3	Yoke (temporary)			
4	Beam ¹⁾	■		
5	Plug	■		
6	Tie rod			
7	Gate	■	■	
8	O-ring	■	■	■
9	Retainer ring	■		
10	Retainer ring screw	■		
11	O-ring	■	■	■
12	Seat	■	■	■
13	Bolt	■		
14	Washer	■		
15	Valve body side (inlet)			
16	Body gasket/o-ring	■	■	
17	Guiding pads	■	■	■
18	Valve body side (outlet)			
19	Nut	■		
20	Bolt	■		
21	Purge port plug			
22	Hexagon socket screws	■	■	■
23	Bushing			
24	Box packing braids	■	■	■
25	Stud bolt	■	■	
26	Gland			
27	Washer	■	■	
28	Nut	■	■	



Spare part kits

- Complete
- Essential
- Basic

Each valve is marked with a label including the valve's article and serial number. With this info we can ensure you receive correct spare parts to your valve.

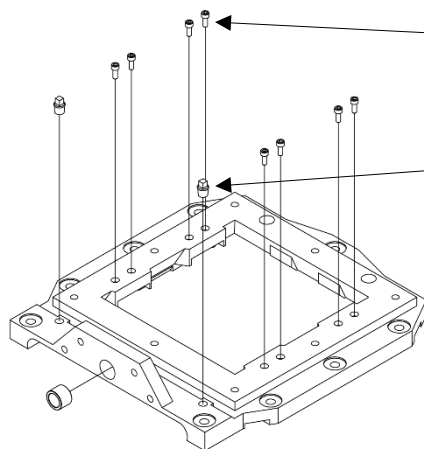
Request offer on spare parts at stafsjo.com/support/original-spare-parts/

1) Gate guards are also recommended on remote operated valves.



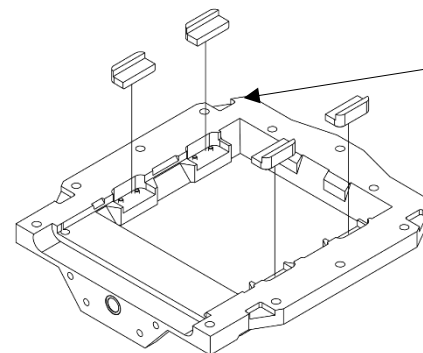
- Always consider the application of the valve and carefully prepare relevant personal safety equipment before starting any valve assembly.
- Valve assembly shall be performed by qualified personal. Qualified are those persons who, due to experience, can judge the risk and execute the work correctly and who are able to detect and to eliminate possible risks.

A1



- Assemble the guiding pads hexagon socket screws. Use thread locker on the screws.
- Assemble the purge port plug. Use thread seal tape and thread sealant.

A2



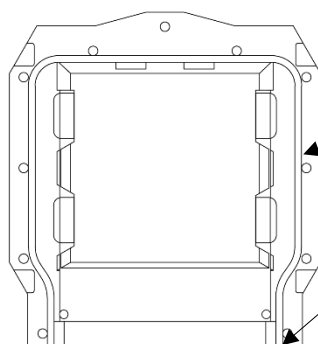
- Assemble the guiding pads into the slots and onto the hexagon socket screws. They are loosely attached.



Guiding pads can be replaced with new ones without splitting the valve body house.

A3

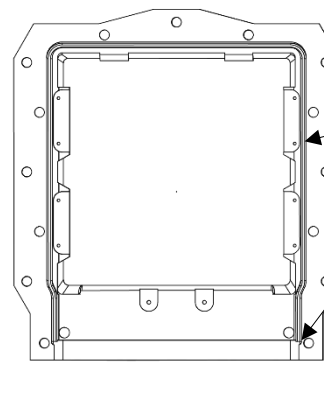
RKO DN 100-DN 250 (4" - 10") with grafoil tape as body seal



- Clean the surfaces where the graphite tape shall be placed.
- Place the graphite tape as close to the bolt holes as possible without tearing the graphite foil.
- 1/3 of the graphite foil should be inside the gland box and protrude 5 mm outside the side.

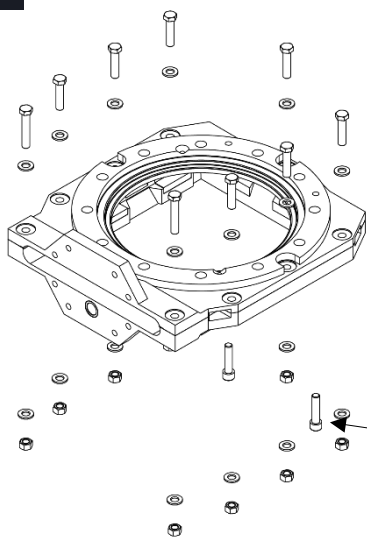
A4

RKO DN 300-DN 600 (12" - 24") with o-ring as body seal



- Clean the surfaces where the o-ring shall be placed.
- Put the o-ring in the groove. Apply glue if necessary to keep in place.
- The o-ring should protrude 3-4 mm into the gland box.

A5

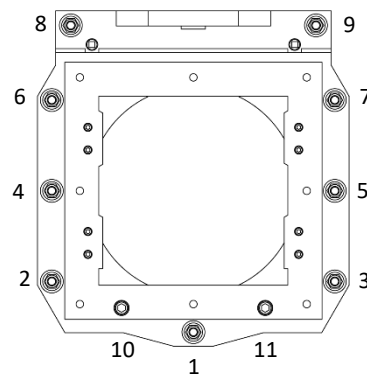


- Put inlet valve body side in place.
- Assemble the valve body bolts. Nut with washer shall be on valve body outlet side together with hexagon bolts. Apply thread paste on stainless steel bolts, but not on FZB bolts.
- Bolts of different lengths may be required.
- Assemble body bolts manually by hand.

Hexagon bolt

A6

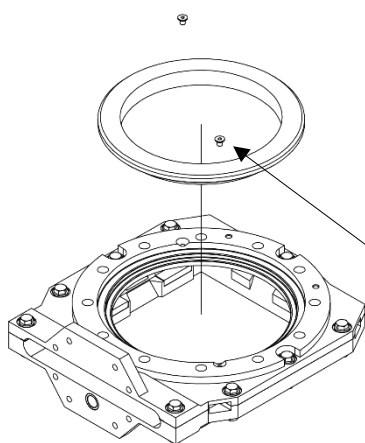
Torque (Nm) for valve body bolting



Valve size	Bolt	Nm A2-70	Nm A4-80	Nm FZB 8,8
DN 100 - DN 150	M10	35	45	47
DN 200 - DN 300	M12	60	75	80
DN 350 - DN 600	M16	140	190	200

Tighten the bolts crosswise, **minimum twice**.

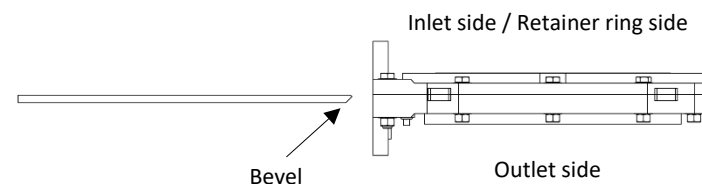
A7



- Assemble the seat onto the retainer ring. See **"Re-packing instruction"**.
- Push the retainer ring kit into the valve body bore.
- Tighten the retainer ring screw. Top of the retainer ring screw must not be higher than the retainer ring surface.

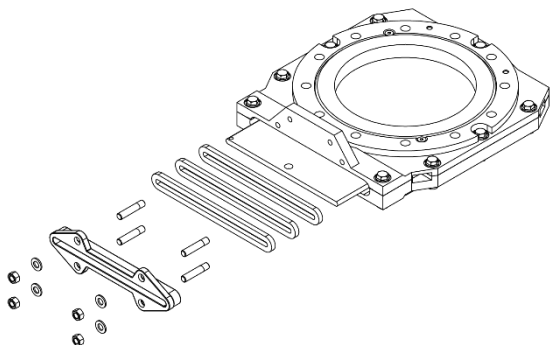
A8

- Insert the gate into the valve body.
- Gate bevel should face outlet side.
- If the gate is difficult to insert, loosen the retainer ring slightly.

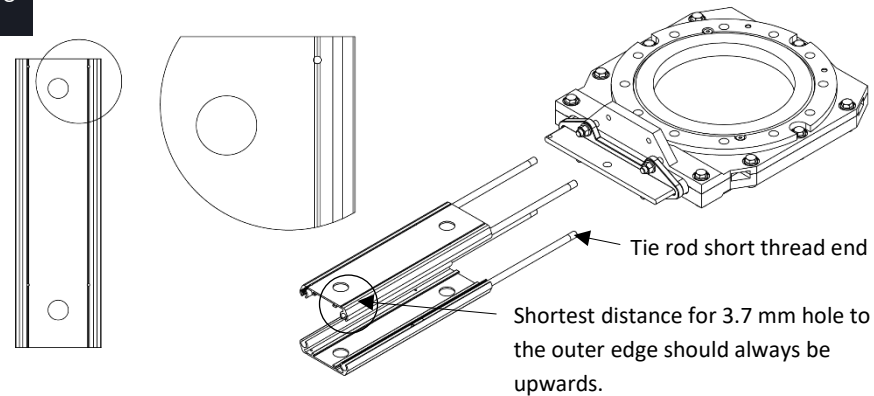


A9

Assemble box packing and the gland. See “Re-packing instruction”.



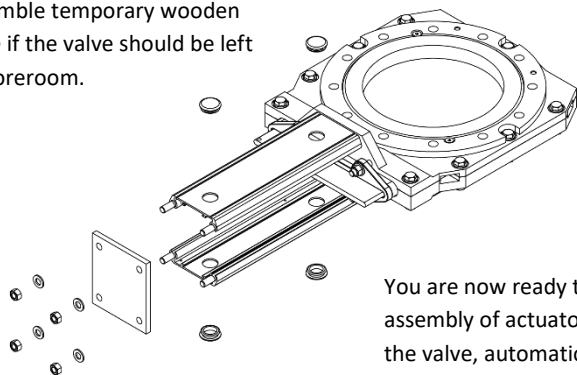
A10



- Install the tie rods manually with the short thread end first. Long thread should be upward against the actuator. Use thread paste on both threads.
- Find the thread before using the machine.
- Assemble the beams onto the tie rods.

A11

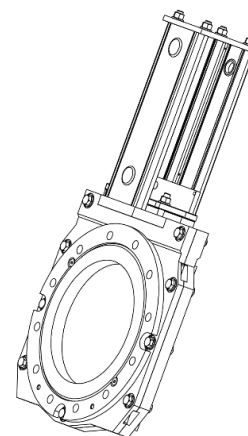
- Install black plugs in the beams.
- Assemble temporary wooden plate if the valve should be left in storeroom.



You are now ready to continue with assembly of actuator you intend to use on the valve, automation equipment and relevant gate guards (if any). Observe and respect relevant instructions.

A12

Well done!



Please note the RKO knife gate valve must be installed in closed position only.